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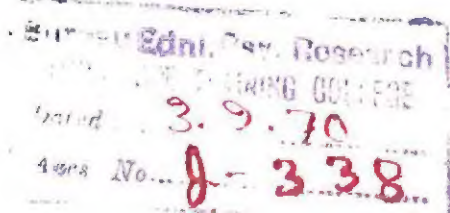
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INTER CASTE RELATIONSHIP AS REFLECTED IN THE STUDY OF ATTITUDES AND OPINIONS OF SIX HINDU CASTE GROUPS*

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A. INTRODUCTION

In any psycho-social survey assessments of attitudes and opinions should find a very important place. In order to understand the inter-group tension attitudes and opinions expressed verbally or in actual situations need to be studied carefully and systematically. But what is an attitude? There is as yet no complete agreement upon the definition of this concept but there are some points of unanimity among the well known authorities in this field. According to G. W. Allport (1) an attitude is "a mental or neural state of readiness exerting a directive influence upon the individual's response to all objects and situations with which it is related." Krech and Crutchfield (6) define it as "an enduring organisation of motivational, emotional, perceptual, and cognitive processes with respect to some aspect of the individual's world." Jahoda, Deutsch, and Cook (5) consider it to be "a more or less enduring predisposition to respond affectively toward a specific entity." Newcomb (7) is of the opinion that "attitudes represent persistent general orientations of the individual towards his environment." Campbell (2) makes it more specific and describes it as follows: "An individual's social attitude is an enduring syndrome of response consistency with regard to a set of social objects." But Thurstone and Chave (8) generalised the concept so as to include "the sum total of a man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic." According to Thurstone and Chave attitude is a subjective and personal affair.

From all these definitions a few salient points of agreement may be derived. These important characteristics according to Duyker (4) are that

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the attitudes are relatively permanent, referential, and often shared by groups or persons. Social Psychology is concerned with attitudes towards shared referents. They are also evaluative. They are expressed as positive or negative. This is expressed by Young (9) when he says, "attitudes are reaction tendencies for or against, favourable or unfavourable, like or dislike." According to Campbell and Katona (3) "attitudes are generalised view points of approval and disapproval." So neutral attitudes do not exist. An attitude exists either for or against a referent which may refer to any part of the environment and in the present investigation the attitudes of subjects mostly refer to certain social aspects as they are related to casteism.

Attitudes may be formed in individuals through their own experiences or through the adoption of attitudes readily available in the shared frames of reference, group norms, and values held by social fellow beings. Thus the social environment is of decisive importance in the formation of attitudes.

Opinion, according to Thurstone and Chave (8), will "mean a verbal expression of attitude." "An opinion symbolises an attitude." So opinions are used as the means for measuring attitudes. As it is not always possible to distinguish opinions from attitudes in the verbal expressions of them attempts have been made in the present study to assess the subjects' attitude as expressed by the acceptance or rejection of opinions. By knowing the attitudes and opinions of people it may not be possible always to predict the behaviour of the people in the actual situations but all the same it will be interesting to know from the social point of view what people say that they believe, even if their conduct is not always consistent with their expressed opinions. To quote Thurstone and Chave (8): "Even if they are intentionally distorting their attitudes we are measuring at least the attitudes which they are trying to make people believe that they have." "All that we can do is to minimise as far as possible the conditions that prevent our subjects from telling the truth or else to adjust our interpretations accordingly."

B. PROBLEM AND PROCEDURE

In the context of everchanging social and political setting the attitudes and opinions of different castes in regard to various caste problems and relationships are of fundamental significance. With this purpose in view an attempt has been made to determine the opinions and assess the attitudes of three important high caste Hindus, namely, the Brahmins, the Karans,

and the Khandayats and three sub castes of the Harijan³ group which includes the Dhobies, the Panas, and the Hadies. Each of the six caste groups includes 100 subjects selected from among the members of that caste group of Cuttack City by stratified quota sampling technique. The city was divided into several areas and from each area a specific number of individuals was selected randomly. This method was mainly used to find out the samples of high caste Hindus and the Dhobies who are widely distributed in the city population, but in the case of the other two low caste Hindus, namely the Hadies and Panas, random selection was made from among them who usually live in segregated areas. The samples were derived from the adult male populations only. It was not possible to control any other factor except the caste.

It was planned to interview all the subjects individually with printed questionnaire, but some of the high caste Hindus were not very much willing to be interviewed. They preferred to answer the questionnaire by themselves privately. After the questionnaire was filled up the interviewers collected the necessary information from the subjects. But in the case of low caste groups all the subjects had been interviewed by specially trained interviewers belonging to the same caste. In order to ensure proper interviewing and data collection, the interviewers were checked from time to time by interviewing some of the subjects already interviewed by them. This method worked quite satisfactorily. A few cases had to be rejected for certain irregularities or bad interviewing. Data were collected from 600 subjects in all belonging to six caste groups. As a result of this it became quite easy to calculate the responses in percentages. Most of the Harijans had to be paid in terms of daily wages in order to create an interest and incentive in them.

Before the final questionnaire was formulated a pre-test was tried on a small sample of high and low caste Hindus. In the light of such results the final questionnaire was selected. In the pre-test it was discovered that the illiterate subjects were not able to place their views on more than three-point scales. They were unable to make finer discrimination on a five- or seven-point scale. So the questionnaire was modified accordingly.

The questionnaire formulated to assess the opinions and attitudes of the samples contained 36 statements in all. All these statements were not given in one list. They were divided into three independent units. One unit containing 18 items was included in one list and administered in

³ The word Harijan was used by Gandhiji to mean all the low caste Hindus popularly known as untouchables. It literally means "the people of God."

one sitting whereas the other two lists containing the rest of the items were administered in a separate sitting after a lapse of a week or so along with other tests. Attitudes and opinions discussed here formed only a part of an extensive study to map the other areas of caste tension. A different questionnaire had different types of questions but all these had been pooled together and reclassified under different heads for convenient discussion. They are given in Table 1.

TABLE 1

Table No.	Statement No.	Categories
2a	1-5	Responses implying strong action and aggression.
2b	6-9	Responses implying revolution and strong determination.
2c	10-15	Responses expressing social distance and antagonism.
2d	16-20	Responses desiring equality of social status.
2e	21-25	Responses implying economic solution.
2f	26-28	Responses having political implications.
2g	29-30	Responses pertaining to education.
2h	31-36	Responses expressing opinions on the prevalent social issues.

C. SUBJECTS

There is a hierarchical order in respect of social status among the high caste and low caste Hindu groups studied in this investigation. Among the high caste Hindus the Brahmins occupy the highest social status, and then comes the Karan caste, and last of all the Khandayats. The Karans not only come next to the Brahmins in social status but in the economic and political fields also they are the staunch rivals of the Brahmins in Orissa now. There seems to be a strong bitterness and antagonism between these two castes. This rivalry has given rise to a bitter communal feeling against each other mostly among the educated and well to do people. The term Khandayat literarily means the soldier and several centuries back they were really the soldiers to the rulers of those times, but now this group is mainly recruited from the peasantry class. When they get high education or grow rich some of them like to describe themselves as Karans. The Karans have come mainly from the clerical groups. They are economically better off than Khandayats. Culturally they consider themselves very close to the Brahmins. There is a possibility of social locomotion between the Karans and Khandayats but there is no such possibility between the Brahmins and any other caste. The Brahmins form a close social group excluding any inter caste communication. From the sociological point of view the Brahmins can be taken as the highest caste and does not have any marital relationship with any other non-Brahmin caste.

Among the Harijans there is also caste stratification. The caste feeling and antagonism among the low caste untouchables is very bitter. Each of the three low caste groups mentioned here is a closed caste group without any possibility of social inter communication. Not only there is no marital relationship among them but they even do not take food or water from the members of the other Harijan castes. Each caste is supposed by its members as being superior to the other. But socially and economically the Dhobies (Washermen) seem to enjoy better status at least in the cities. Next to the Dhobies comes the Pana group whose members mostly belong to the labouring class. Although some of them specialise in country liquor preparation they do not have any stereotyped caste profession like the Dhobies and the Hadies. The Hadies (Sweeper) seem to occupy the lowest status from the social as well as professional point of view. Their main communal work is to clean the drains, latrines, and roads.

But from the broad social, economic, and caste points of view the three upper caste groups may be taken together to form the high caste Hindus and the lower three castes as belonging to the broad untouchable group having more or less the same social disadvantages. So it is expected that besides having their own caste outlook the upper caste groups taken together are likely to differ from the lower caste groups in their attitudes and opinions in regard to certain caste and social issues. But a very important point should be remembered in this connection. In the economic and political fields the class and group competition, rivalry, and antagonism can be clearly marked even at the conscious level. The poorer or oppressed groups may not be willing to be reconciled to their economic status and they may have a strong desire to go higher up economically and there may also be a possibility to achieve that goal. In other words, under certain circumstances political and economic mobility is achievable. But in the field of caste profession and rights there has been no such inter caste communication in the last hundreds of years. So, there is a great social conformation in regard to casteism. The lower caste people may grumble against economic hardship but there is no such open grievance against the caste impositions which have been accepted over centuries. The caste characteristics are taken to be as real as skin colour or body height. This kind of uncritical and century old social acceptance might have been disturbed in the last decade by the revolutionary social reforms. The whole caste structure has been challenged socially, legally, and politically and new sparks of revolt have been deliberately fanned by various social forces. But how far this simmering has spread into the deep recesses of caste mind is a question. Studies of this kind may throw some light on such problems.

D. RESULTS AND DISCUSSION

Table 2a contains responses to five questions expressing strong action and a certain amount of aggression. Seventy-nine per cent of the Harijans feel that they should be excused whereas 63 per cent of the upper caste people would like to excuse them when they become insolent to upper caste people. Among the three lower caste groups only 64 per cent of the Dhobies feel this way whereas 94 per cent of the Hadies and 80 per cent of Panas uphold this view. As the Dhobies are economically and socially much better off than the other two low caste groups their responses are similar to those of upper caste groups. Twenty-one per cent of them desire that the Harijans should be reproached and 11 per cent want to get them fined and jailed like 22 per cent of the upper caste groups. Apart from a few minor differences there does not seem to be much difference in regard to this among the three upper caste people.

One would expect that all the lower caste people should prefer the first category but the situation becomes complicated due to inter caste tension among themselves. This point should be remembered throughout the discussion. When lower caste people prefer strong action against the lower caste groups they mostly mean it only for the other low caste groups.

In response to Question 2 the picture is completely reversed. As many as 65 per cent of the upper caste people do not feel that the Harijans would become unbearable if not held in their proper place, but only 44 per cent of the Harijans feel this way about themselves. This may mean that higher caste people are more tolerant than the lower caste people in this regard. Here again the Dhobies are the most intolerant group. Having certain economic and social advantages they probably do not like to face competition from the other two lower caste groups. In response to Question 3 73 per cent of the upper caste Hindus are opposed to segregation as against 58 per cent of the Harijans. The age old habit of social conformation might be working in the minds of the lower caste people who still want to retain segregation. Here also the Dhobies respond like the high caste groups.

Eighty-six per cent of the Harijans would like to describe one who objects to caste conventions as a traitor but only 48 per cent of the upper caste people feel this way. The strength of this opinion is seen almost in the inverse order to caste hierarchy. Forty-six per cent of Brahmins are in favour of this whereas 88 per cent of the Hadies and Panas support this view. Others fall in between excepting the Karans whose percentage is slightly higher

TABLE 2a
DISTRIBUTION OF RESPONSES IN PERCENTAGE

No.	Statements		Hadi	Dhoba	Pana	Castes				Total
						Total	Brahmin	Karan	Khandayat	
1	In a community where the Harijans outnumber the upper class, a Harijan who is insolent to an up. class man should be:	(a) Excused	94	64	80	79	60	68	60	63
		(b) Reproached	2	21	1	8	10	2	11	8
		(c) Fined or jailed	3	11	6	7	23	21	23	22
		(d) Should be beaten	0	0	3	1	0	0	1	0.3
		(e) Turned out of the village	1	4	7	4	6	6	5	6
2	The Harijans if not held in their proper place will become unbearable.	Yes	43	62	59	55	31	32	37	33
		No	52	38	41	44	67	65	62	65
3	Low caste people should be segregated from those of the Upper caste people.	(a) Strongly favour	22	21	38	27	20	19	15	18
		(b) Undecided	11	9	22	14	9	8	10	9
		(c) Strongly disfavour	65	70	40	58	71	73	75	73
4	One who objects to caste conventions is a traitor.	Yes	88	83	88	86	46	51	48	48
		No	12	14	11	12	36	42	39	39
		?	0	3	1	1	18	7	13	13
5	Inter - Caste marriage should strongly be discouraged.	Yes	57	58	53	56	31	24	17	24
		No	41	40	39	40	55	64	68	62
		?	2	2	7	4	14	12	15	14

than that of the Khandayats. This also strengthens the view that the low caste people are more conservative than the high caste people. Similar is the picture when we come to Question 5. Fifty-six per cent of the lower caste people would like to discourage inter caste marriage as against 24 per cent of the upper caste. This no doubt indicates the liberal view of the upper caste people but in real life there are very few inter caste marriages amongst them. So liberalism is expressed only at the verbal level.

Considering these five issues it can be said in conclusion that (a) low caste people are more conservative and intolerant in regard to casteism than high caste people; (b) from among the low caste groups the Dhobies seem to diverge rather sharply from the other two castes and this can be explained by the fact that they are different from the other two low castes economically and socially. (c) some of the findings here can also be explained by the help of social conformation theory.

Analysing Table 2b it is found that 42 per cent of the lower caste and 51 per cent of the higher caste people believe that inherent human nature is to revolt, while 11 per cent of the latter group are undecided and 37 per cent of them are definitely against this idea, while 51 per cent of the lower groups do not approve of this. This suggests that more of the higher and less of the lower caste people believe that inherent human nature is to revolt. But when it comes to the idea of a revolution under certain circumstances there are 71 and 77 per cent of people in favour of it from the lower and higher caste groups respectively. There is hardly any difference among the six caste groups in this regard. There are only 21 and 12 per cent from the low and high caste groups respectively who are against such a revolution. In regard to both the problems more of the higher caste people are in favour of revolution. It may mean that more of the higher caste people are conscious of their rights and strength and so look forward to a revolution, whereas more of the lower caste people appear to be peace-loving and this may be due to their inherent social weakness and sense of inferiority. The third problem in this series is related to the statement that man's nature can never be changed, so clashes and conflicts are inevitable. If the favouring side is considered as a whole there is hardly any difference between the two caste groups and there is also not much of a difference between the favouring and disfavouring sides. The subjects are roughly fifty-fifty on both sides.

In the case of showing determination to carry out any plan the pattern of responses is almost like that of the second one. Both the groups seem

TABLE 2b
DISTRIBUTION OF RESPONSES IN PERCENTAGE

No.	Statements		Castes							
			Hadi	Dhoba	Pana	Total	Brahmin	Karan	Khandayat	Total
6	To revolt is the inherent human nature.	Yes	45	27	55	42	53	59	42	51
		No	48	62	42	51	37	33	42	37
		?	5	9	3	6	10	8	16	11
7	Under certain circumstances revolution is absolutely essential.	Yes	72	70	71	71	75	80	76	77
		No	20	22	20	21	10	12	15	12
		?	6	6	19	10	15	8	9	11
8	Man's nature can never be changed; so clashes and conflicts are inevitable.	Moderately in favour	18	30	40	29	37	29	35	34
		Strongly in favour	30	13	30	24	21	22	17	20
		Disfavour	51	54	30	45	41	49	48	46
9	Nothing can stop us if we are determined to carry out any plan.	M.F.	62	81	67	70	77	75	79	77
		S.F.	30	17	27	25	14	17	9	13
		D.F.	8	1	6	5	8	8	12	9

to be overwhelmingly optimistic and courageous in carrying out any plan with determination.

In short the salient points in this series are (a) more of the upper caste people have attitudes of revolt and favour a revolution, (b) all the groups seem to be overwhelmingly optimistic and courageous in carrying out any plan.

Table 2c deals with the problems of inherent inferiority and antagonism among the castes. Twenty-eight per cent of the lower caste and only 18 per cent of the upper caste people accept the idea that it is by God's decree that the backward people are innately inferior and upper caste people are innately superior. A similar idea has also been expressed to the next question. Here also 57 per cent from among the Harijans as against 46 per cent from the higher castes feel that the low caste people are only capable of physical work and not capable for intellectual work. This indicates a certain amount of inferiority complex among the low caste people. Almost an equal number of people of both the groups (68 and 69 per cent) do not accept the first suggestion whereas there is a greater disparity in regard to the second one. There are three per cent doubtful cases among the low caste groups compared to 12 among the high castes for the first issue. A similar tendency is also noticed in regard to the next issue. Thirty-five per cent of the untouchables think that laws against untouchability are detrimental to social upliftment, but there are 30 per cent in this category from the higher castes. This may be due to the habit of social conformity and a sense of inferiority of the lower castes.

Responses to the next two problems (Nos. 13 and 14) in this series are very surprising. Sixty per cent of the lower caste people support the statement that it is not possible for a gentleman to mix freely with low caste people whereas only 29 per cent of the higher caste people think so. This probably indicates a very strong sense of inferiority in the low caste groups whereas the high caste groups seem to be more liberal in this respect. From among the three high caste groups the Brahmins seem to be more liberal than the other two upper castes. In regard to inter caste marriage 72 per cent of the Harijans can not dream of such a possibility but there are only 49 per cent of the high caste groups in this category. Low caste people seem to be more rigid and less progressive in this respect than the higher caste people. From among the higher castes the Brahmins are more averse to this idea than the other two castes. The Brahmins may be more liberal in the other social fields but they do not want to go down to lower groups for such an intimate relationship as marriage. So 62 per

TABLE 2c
DISTRIBUTION OF RESPONSES IN PERCENTAGE

No.	Statements		Castes							
			Hadi	Dhoba	Pana	Total	Brahmin	Karan	Khandayat	Total
10	It is by God's decree that backward people are innately inferior and Upper Caste people are innately superior.	Yes	22	30	32	28	20	17	18	18
		No	74	70	61	68	66	70	72	69
		Doubtful	1	0	7	3	14	13	10	12
11	The low caste people can only do that kind of work which requires physical labour. But they are incapable of doing intellectual work.	M.F.	29	42	40	37	31	26	25	27
		S.F.	10	20	31	20	18	25	15	19
		D.F.	60	38	29	42	49	49	60	53
12	Laws against untouchability are detrimental to social upliftment.	Yes	20	51	34	35	34	30	27	30
		No	71	48	60	60	55	59	57	57
		?	9	1	5	5	11	11	16	13
13	It is not possible for a gentleman to mix freely with low caste people.	M.F.	39	30	44	38	16	6	14	12
		S.F.	22	21	23	22	24	15	12	17
		D.F.	39	48	33	40	60	79	74	71
14	I can never dream that I will ever like to marry in any other caste.	M.F.	65	47	46	53	45	27	31	34
		S.F.	15	22	20	19	17	12	16	15
		D.F.	20	30	33	28	37	57	53	49
15	The ways of living of different castes are so rapidly disappearing that it becomes necessary now to maintain them by all means.	M.F.	75	75	61	70	43	40	42	42
		S.F.	17	11	25	18	13	13	18	15
		D.F.	8	14	14	12	38	41	40	40

cent Brahmins disapprove inter caste marriage compared to 39 and 47 per cent people of the other two high caste Hindus. The last question in this series is meant to maintain the caste system under the present changing circumstances. In this connection also there is a greater desire to maintain the caste system among the lower caste people (88 per cent) than among the higher castes (57 per cent).

These are some of the important findings in this series: (a) The lower caste people show a very strong sense of inferiority. Their attitudes indicating intellectual inferiority towards themselves are stronger than those of the upper caste people. (b) More of the upper caste people are against untouchability than untouchables are against this social evil. (c) In regard to inter caste marriage the upper caste people are more liberal than the Harijans. Among the upper caste people the Brahmins are more conservative regarding this issue. These findings merely confirm the previous results.

Table 2d deals with the attitudes of groups desiring equality of social status with the other caste groups. Conveying 'Namaskar' (wishing one another with respect) to a Harijan is a very delicate and unpleasant task for the upper caste people, particularly for the Brahmins. But even then 64 per cent of the Brahmins do not mind doing so compared to 72 per cent of the other two upper castes. When the question of equality of status among the Harijans is considered 49 per cent of the Harijans do not feel that all the sub castes among them are equal in status. Of the three Harijan groups the Panas are least opposed to this. But the interesting point in this respect is the attitude of the upper caste people. Seventy-three per cent of them are not prepared to treat all the Harijan castes on the same footing. This attitude is obviously due to the different communal occupations associated with the various low caste groups. Here again the Brahmins seem to be more liberal than the non-Brahmin upper caste people.

Questions 18, 19, and 20 deal with the problems of free access of the Harijans to hotels, temples, and residence in the same hostels with the upper caste people, respectively. To the first two questions the pattern of responses is about the same: 92-93 per cent of the Harijans are in favour of this, whereas 71 and 73 per cent of the upper caste people favour this idea. But to the problem of residing in the same hostels 93 per cent of both the groups support the idea. This consensus of opinion of all the castes is probably due to the fact that they are all used to this in actual practice. In this State there are hardly any communal hostels for the different caste

TABLE 2d
DISTRIBUTION OF RESPONSES IN PERCENTAGE

DISTRIBUTION OF RESPONSES IN PERCENTAGE										
No.	Statements		Castes							
			Hadi	Dhoba	Pana	Total	Brahmin	Karan	Khandayat	Total
16	Would you convey 'Namaskar'* to a Harijan who is equal with you both in education and profession?	Yes	93	97	98	96	64	72	72	69
		No	7	2	1	3	36	28	27	30
17	All the Harijans belong to one class and should be treated in the same manner.	(a) Strongly favour	24	22	50	32	12	17	13	14
		(b) Undecided	10	16	28	18	23	5	10	13
		(c) Strongly Disfavour	64	61	22	49	65	77	77	73
18	Harijans should have free access to all the hotels.	(a) Str.F.	93	96	89	93	69	76	68	71
		(b) Undecided	6	2	7	5	15	10	14	13
		(c) Str.D.F.	1	2	4	2	16	14	18	16
19	Harijans should have equal rights in entering into a Temple.	(a) Str.F.	91	96	88	92	74	72	73	73
		(b) U.D.	4	0	8	4	9	14	10	11
		(c) Str.D.F.	5	4	4	4	17	14	17	16
20	It is quite a good thing that Harijan students should reside with the students of up. class in the same school and college hostels.	(a) Str.F.	93	97	91	93	90	95	94	93
		(b) U.D.	6	2	6	5	3	2	3	3
		(c) Str.D.F.	1	1	3	2	7	3	3	4

* Wishing with respects.

groups. Students belonging to all castes—both upper as well as lower—reside in the same hostels. In other words actual social practice in the last decade has changed the age old aversion to living together in the same building. This might also mean that the upper caste people do not mind the students of the Harijan groups to live with them in the same hostels but they do not like all kinds of Harijans to enter into the temples and hotels. This prejudice of the upper castes may be more due to uncleanly habits of the Harijans, but as the dirty habits gradually disappear when they are educated in schools and colleges the upper caste people do not mind their children living with them in the hostels. So it can be reasonably hoped that the caste aversion may in time disappear through the spread of education and culture.

The important points may be summarised as follows: (a) About half of the Harijans and 73 per cent of the upper caste people are not prepared to treat all the Harijan sub-castes on equal footing. (b) There is a greater unanimity among all the castes in regard to inter communal living in the school and college hostels, but in regard to free access to the hotels and temples the percentage of upper caste people favouring this idea falls down by about 20 per cent.

Questions in Table 2e deal with economic equality and the idea of giving the same economic opportunity to all the castes and communities. Different questions emphasise the different economic aspects of the problem. On all the issues excepting the one which says that all castes can be abolished by economic equality there is a remarkable agreement in the attitudes of the castes. The pattern of responses is about the same: 84 to 86 per cent of the lower caste and 91 to 98 per cent of the upper caste subjects are in favour of equality in an economic deal for all the castes. On all these problems the percentage of favourable responses of the upper caste people is systematically greater than that of the lower caste people. This unmistakable difference in the trend of attitudes of the two caste groups may be due to lack of self confidence among the lower caste groups. There is a big drop in the percentage of favourable opinion of both the groups to Question 24 which implies that by economic equality all castes can be abolished. Seventy-one per cent of the Harijans and 64 per cent of the upper caste people support this statement. Those who do not support this probably think that by sheer economic equality the caste system can not be abolished. There may be other social and religious obstacles. But this appeals to more of the Harijans than upper caste people; the reason is obvious.

TABLE 2c
DISTRIBUTION OF RESPONSES IN PERCENTAGE

DISTRIBUTION OF RESPONSES IN PERCENTAGE										
No.	Statements		Castes							Total
			Hadi	Dhoba	Pana	Total	Brahmin	Karan	Khandayat	
21	Would you be glad if you hear of a Harijan who has bought a house and a garden?	Yes	92	94	83	90	95	92	95	94
		No	7	5	16	9	5	7	5	6
22	If the Harijans work with equal competence with the up. caste people they should receive same salary as the upper caste people.	(a) Str.F.	82	92	82	85	90	97	92	93
		(b) U.D.	7	5	17	10	6	2	x	3
		(c) Str.Dis.F.	7	2	1	3	4	1	8	5
23	All people should get equal opportunities in all kinds of work.	Yes	91	84	76	84	88	95	89	91
		No	7	10	19	12	10	3	9	7
		?	2	4	5	4	2	2	2	2
24	All castes can be abolished by economic equality.	Yes	81	58	73	71	71	64	58	64
		No	12	35	18	22	15	22	27	21
		?	6	7	7	7	14	14	15	14
25	The Govt. should see that people of all the castes get enough food and live happily.	M.F.	86	90	81	86	99	97	97	98
		S.F.	10	8	14	11	1	3	2	2
		D.F.	4	1	5	3	0	0	1	1

The main conclusions in the economic field are: (a) There is a greater unanimity among all the castes to provide economic equality and equal opportunities for all the castes. But the indications are that the lower caste people are less confident about it than the higher caste groups. (b) Most of the people of the higher and lower caste groups think that the caste system can be abolished by economic equality.

Three questions of Table 2f deal with three different political problems. The first deals with the question of a Harijan contesting in the general election: 85 per cent of the Harijans and 82 per cent of the upper caste groups are in favour of this. In regard to the question of national policy being determined by majority opinion there is also hardly any difference between the two groups: 79 per cent of the Harijans and 80 per cent of the other groups are in favour of this. Both these views are in conformity with the general political trend of the country where the Harijans are given equal opportunity of fighting the election and the principle of majority decision is generally accepted. But there is a divergence of views in regard to the question that all the laws and constitutions are so framed as to favour the rich as against the poor: 68 per cent of the Harijans and 58 per cent of the upper caste people are in favour of this view. Among the Harijans also there is a great difference of opinion. The percentage of Dhobies supporting this is much lower than that of the Hadies or Panas. The percentage of the Hadies in its favour being 87 per cent is largest among all. The Pana group comes in between. This divergence is probably due to economic and social differences that exist among the three groups. The higher the social status of a group the less the number in its favour. There is no such difference of opinion among the upper caste groups.

In short the essential points may be summarised as follows: (a) There is a great unanimity among the castes in regard to the principles of giving equal opportunities to all to contest elections and deciding issues by majority decision. (b) The lower the caste, the greater the feeling in favour of the idea that the law and constitutions are framed more in favour of the rich than the poor.

There are two educational questions in Table 2g: 97 per cent of the upper caste and 90 per cent of the lower caste people are in favour of free education for all the caste groups. But the next question is how far in the educational system a Harijan should be allowed to go: 60 per cent of Harijans and 66 per cent of the higher caste groups are in favour of higher education for the Harijans like others. But the most interesting thing

TABLE 2f
DISTRIBUTION OF RESPONSES IN PERCENTAGE

DISTRIBUTION OF RESPONSES IN PERCENTAGE										
No.	Statements		Castes							
			Hadi	Dhoba	Pana	Total	Brahmin	Karan	Khandayat	Total
26	Besides being a leader of their own group there is no harm if a Harijan contests in the general election.	(a) Str.F.	87	88	79	85	82	84	80	82
		(b) U.D.	9	7	16	11	10	11	5	9
		(c) Str.D.F.	1	4	5	3	8	5	15	9
27	National policy should be determined by reference to majority opinion.	Yes	80	74	82	79	78	83	78	80
		No	17	20	6	14	6	8	13	9
		?	3	6	11	7	16	9	9	11
28	All the laws and constitutions are so framed as to favour the rich as against the poor.	Yes	87	49	69	68	58	58	59	58
		No	11	37	22	23	33	29	22	28
		?	2	14	9	8	9	13	19	14

is there is a great divergence of views in this respect among the low caste groups. When 82 per cent of the Dhobies are in favour of higher education for low caste groups only 43 per cent of the Hadies and 56 per cent of the Panas are in favour of such an education. Most of the Hadies will be satisfied with a lower standard of education. The Dhobies seem to be more progressive in this regard. Even after all the social reforms and political education in favour of giving equal opportunities to all irrespective of caste and creed 34 per cent of the upper caste people and 40 per cent of the lower caste people still believe that higher education is not meant for the lower caste people. Again there are more Harijans against themselves than the upper caste people. The same kind of mental characteristics of the Harijans are to be seen again and again.

The main points are summarised as follows: (a) Almost all the subjects are in favour of free education for all. (b) Forty per cent of the lower caste and 34 per cent of the upper caste people do not recommend higher education for the lower caste people.

Problems in Table 2*h* deal with some opinions and usage on casteism very much prevalent in the society. The lower caste people are almost equally divided on the use of the word "Chhotajati"—literally means low caste in a derogatory sense—whereas 84 per cent of the upper caste groups are not in favour of using the term. Seventy-three per cent of the Harijans feel that the caste system has been introduced only by men whereas 83 per cent of the higher groups hold this view. Here again the upper caste people seem to be more progressive than the lower caste groups.

Eighty-eight per cent of the Harijans think that they face much inconvenience due to social stratification, but only 66 per cent of the higher castes consider it to be inconvenient. This is quite understandable. The lower castes are much more hard pressed economically due to social stratification. The Brahmins being least inconvenienced amongst all have the least percentage of responses supporting this. Even this figure of 60 per cent is quite high and this indicates definite liberalism among the Brahmins. But 84 per cent of the Brahmins realise that ultimately casteism will disappear: 88 per cent of the Harijans hold this view compared to 77 per cent of the other two upper caste groups. Eighty-four per cent of the Harijans also believe that the treatment of the upper caste people towards the lower caste people is very harsh and 60 per cent of the upper caste people admit it. The lower the caste the higher the percentage of responses in its favour. Such a large percentage of upper caste people accepting this

TABLE 2g
DISTRIBUTION OF RESPONSES IN PERCENTAGE

DISTRIBUTION OF RESPONSES IN PERCENTAGE										
No.	Statements		Hadi	Dhoba	Pana	Castes			Total	
						Total	Brahmin	Karan		Khandayat
29	How far in our educational system should a Harijan be allowed to read?	(a) Need not read at all	1	2	3	2	1	1	x	0.6
		(b) Knowing of the alphabets	4	3	2	3	3	5	5	4
		(c) M.E. Standard	18	4	16	13	14	9	12	12
		(d) Matric Standard	33	8	22	21	16	21	14	17
		(e) College and tech. edn., like others	43	82	56	60	66	64	69	66
30	Education should be free for all groups.	Yes	91	89	91	90	98	98	95	97
		No	4	8	8	7	2	x	2	1
		?	5	3	1	3	0	2	3	2

view rather proves the fact that this is a generally accepted opinion of the population. This strong belief might pave the way for speedier social reforms.

The last question in this table states that nepotism is very much prevalent in our society. To this 95 per cent of the upper caste people agree compared to 79 per cent of the lower groups. Although the vast majority of either group contributes to this opinion yet upper caste people are more conscious of this problem than the lower castes. The upper caste people face greater economic competitions in order to maintain higher forms of social life than the lower castes. That is why they feel more acutely than others regarding this social evil. This is a sad reflection no doubt on our present social life.

The essential points in this series may be summarised in the following manner: (a) There is further evidence that higher caste people are more liberal than lower caste people. (b) A very large section of Harijans believe that they are very much inconvenienced due to caste stratification and they are harshly treated by the upper caste people. (c) Most of the people believe that ultimately casteism will disappear. (d) A vast majority of both the castes holds the view that nepotism is very much prevalent in the present society.

E. SUMMARY AND CONCLUSIONS

An attempt was made to assess the attitudes and opinions of six Hindu caste groups towards issues relating to casteism and other related social problems. Out of the six caste groups three belonged to lower caste untouchable group and the other three came from the upper caste Hindus. Each caste group comprised 100 subjects selected by stratified quota sampling technique.

Altogether 36 questions were formulated after proper pre-testing on a smaller but similar sample. Most of the people were interviewed but some subjects who were not willing to be interviewed were allowed to fill up the questionnaire privately. All these questions were classified under eight subheads for the purpose of discussion.

The following broad conclusions can be derived from the results.

1. The upper caste people seem to be more liberal and progressive in regard to casteism. They are more against untouchability than the untouchables are against this social evil.

2. The upper caste people are more conscious of political and economic problems than the lower caste groups. They seem to be more discontented and more in favour of a revolution and drastic change than the lower caste people.

TABLE 2h
DISTRIBUTION OF RESPONSES IN PERCENTAGE

No.	Statements		Hadi	Dhoba	Pana	Castes Total	Brahmin	Karan	Khandayat	Total
31	Do you approve the use of the term "Chhota-jati"?*	Yes	54	49	41	48	17	12	13	14
		No	44	48	58	50	82	88	83	84
32	Man has introduced this caste system.	Yes	71	82	67	73	82	84	82	83
		No	27	16	31	25	16	12	13	14
		?	1	1	2	3	2	4	5	3.6
33	We face much inconveniences due to social stratification.	Yes	85	78	77	80	60	70	67	66
		No	10	15	16	14	29	24	19	24
		?	4	5	7	5	13	6	14	11
34	Ultimately the casteism will disappear from our society.	Yes	93	73	99	88	84	79	75	79
		No	6	22	1	10	6	5	11	7.3
		?	1	5	0	2	10	16	14	13
35	The treatment of the up-class people towards the lower caste people are very harsh.	Yes	87	86	79	84	58	59	63	60
		No	11	7	17	12	31	30	24	28
		?	1	6	4	4	11	11	13	12
36	Nepotism is very much prevalent in our present society.	Yes	90	68	78	79	94	96	92	95
		No	7	24	17	16	1	0	1	0.6
		?	3	7	5	5	5	4	7	5.3

* It means low caste in a derogatory sense.

3. More of the lower caste people seem to conform to the existing social norms in regard to casteism.

4. The low caste people seem to have a strong sense of inferiority. They do not appear to be very confident about their own reforms.

5. The low caste people are more rigid and intolerant about caste reforms than the upper caste people.

6. Although all the caste groups are in favour of free education for all yet quite a few of both the caste groups do not want higher education for the lower caste people.

7. Almost all accept the idea of giving equal economic facilities to all the castes. Most of them believe that by economic equality casteism will disappear.

8. There is a greater unanimity among the castes in regard to inter caste living in the school and college hostels, but there is still opposition to inter caste living in hotels and mixed caste worshipping in temples from a significant section of the population.

9. A large majority of each of the caste groups is in favour of giving political equality to all the castes and accept the principles of majority decision in national and political issues.

10. Most of the subjects believe that in due course casteism will disappear. Even though they express their strong disapproval for the existing social system they seem to be overwhelmingly optimistic and courageous in carrying out caste reforms and plans.

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COMPARISON OF NURTURANCE AND INDEPENDENCE
TRAINING IN JAMAICA AND PUERTO RICO, WITH
CONSIDERATION OF THE RESULTING PERSONALITY
STRUCTURE AND TRANSPLANTED SOCIAL PATTERNS*

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A. INTRODUCTION

Jamaica and Puerto Rico were chosen for this bi-cultural study of child-training because of their geographic and economic similarity, and because a stimulating bibliography has recently become available. Both islands have a population which has suffered the extremes of neglect and exploitation, including the psychological deprivations that accompany squalor. This paper will try to indicate that the imposed culture of England in Jamaica and of Spain in Puerto Rico accounts for the difference observable in the sub-culture of the two islands *where the economy is approximately equivalent*. Where there is insufficient source material for equivalent-economy-comparisons, an attempt will be made to deduce similar backgrounds and adaptation mechanisms from evidence of contemporary personality structure as reported from the islands and in London and New York.

There is a growing opinion among anthropologists that in most cultures the means of earning a livelihood determines the socialization patterns for the children, and later, the general personality structure. This paper, by comparing regions in Jamaica and Puerto Rico where the economic conditions appear to be similar, tries to show that important differences exist nevertheless, and that they are due to the transplanted cultures of England and Spain. The effect of the American culture in Puerto Rico is to bring psychological value changes some of which approach those already existing in Jamaica, and some are characteristically American. While the same economy should produce the same social situations, antecedent cultures can still maintain differences which have a profound effect upon personality structure. These are often subtle in evidence and less easily picked up by the observers than are the more formal aspects of social organization. But

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these psychological concomitants of adjustment and conflict of changing values in changing economics, are deep-seated and important determinants of behavior. Changes in economy—such as from small farming to plantation farming—often produce uneven changes in culture from one region to another, from one class to another. The subculture determines the specific quality and rapidity of the changes even though they are all part of a total adaptation. There is uneven progression toward the same final result—changes for example, which took place on the sugar coast some time ago are beginning to be made in the coffee regions, and changes which earlier affected the lower classes are only now being felt by the middle classes. In Manicaboa, a municipality of small coffee growers, half the population has moved off to become migrant workers (passing from peasantry to proletariat status), part of the population remains traditional Spanish-type small farmers, and part is becoming middle class by a transition to intensive modern farming while still remaining conservative to the old social ways. In time, the unevenness of this condition in Manicaboa will be lessened by transition to a more homogeneous township in step with the general transition of Puerto Rico to the contemporary American pattern.

B. BACKGROUND

1. *History*

Aboriginal Indians inhabited Jamaica and Puerto Rico before the colonial period. Jamaica was conquered and colonized by the Spanish but in 1654 fell by siege to the English who still possess it. In Puerto Rico, it is estimated that there were about 50,000 native Aramak Indians that did not become biologically extinct but were culturally assimilated by the Spanish settlers. Spain ruled Puerto Rico for nearly 200 years until 1898 when it was ceded to the United States.

Slavery was introduced on both islands to expedite large scale production on coffee, tobacco, and, later sugar plantations. The crop had to be harvested rapidly, before it spoiled, and there had to be a close relationship between capital management and labor best supplied by slaves. There is no clearly remaining trace of African tribal life although, because it was polygamous, it may have affected the sexual and marital mores of the present day lower classes; slavery might equally well have been the cause of emphasis on fecundity and promiscuity, concubinage and illegitimacy in order to increase child labor. It is known that plantation owners tried to prevent missionaries from requiring marriage rites among the slaves. Slavery undoubtedly fostered matrilineal family structure since the men

were moved around arbitrarily, whereas the mother-and-children unit stayed together. There may also be a present-day continuity from slave attitudes: unwillingness to work, the uselessness of work as far as the individual is concerned, the feeling that one never gets one's due.

The welfare of Indians or slaves was the responsibility of their owners; on both islands, unquestioned belief in the basic supremacy and enlightenment of the white man, and the assumption that his motives were responsible-and-good instilled a deep dependence in many cases still found today. The landowner became a patriarchal type, completely authoritarian and respected within his region of ownership. He was responsible for the needs and conduct of those who lived on his ground—whether it belonged to the Spanish or the English Crown—and combined the total role of father-provider, father-advisor, and judge of his people. After Emancipation (in 1834 in Jamaica; 1858 in Puerto Rico) some remained on the plantations and many moved back into undeveloped areas—either bought small holdings on unused portions of the plantations, or became squatters on Crown reserves. The middle class grew out of the small landowners who prospered, and enterprising tradespeople. The middle class also grew from the upper class concubinage system whereby attractive colored mistresses were selected by whites and given increased status through rewards, opportunities, and education extended not only to themselves but to their families and children.

2. Religion

Jamaica came under the Church of England (Anglican) or more often the proselyting Presbyterian Church with its Calvinist leanings toward monogamy, austerity (no gambling, drinking, dancing, whoring, etc.), individualism, and the Protestant work ethic. These religious teachings conflicted with all Indian, African, or slavery ideals, and since they were implanted early and vigorously, have produced tension ever since in the Jamaican personality.

Puerto Rico was entirely Catholic until the American period. The priests were educated in Spain, no seminaries for the training of local priests having been developed. While the rural areas were nominally Catholic, the clergy preferred to live in the bigger towns, with the result that enforcement of Catholic teachings in outlying places became somewhat slack. Irregularities such as the saint cults grew up and consensual unions instead of marriages existed openly. In remote areas, church-going lapsed, especially for men, and the home altar became the center for family and small group devotions and rejoicing. Since 1898, Protestantism—especially the Pente-

costal sect—has begun to make some converts among the urban and lower-middle classes because austerity, the work ethic, and individualism are seen as status-increasing and in tempo with the drift toward competition. One or two rural areas bear out Malinowski's theory that insecurity leads to more dependence on magic.

3. *Cultural Similarities*

The two islands can only be compared broadly because of the local adaptation by each subculture to its environment. However, the imposed cultures of England and Spain had a strong general effect on each subculture—which this paper hopes to indicate is still a determining factor in socialization in its adult effects.

The cultural similarities between the islands is due to the pre-existence of slavery. The color difference between blacks and whites was a 'given.' However, there is no color inequality in the Catholic doctrine—all souls are equal before God and in the churches segregation was never enforced as it was in the Protestant churches. Thus in Catholic colonies color snobbery was not as deep as in Protestant colonies—it was a matter of social or economic inequality. The Spanish administration put poor white debtors into the fields side by side with freed slaves, and in many other ways was less color conscious than the English. Nevertheless, color prejudice was strong and painful because inter-marriage with whites was, and still is, seen as status increasing with the result that there continues acute color snobbery between browns and blacks on the fine points of not only skin tone but 'good' hair, and 'good' nose shapes. Those who are darker than others have attitudes of deep inferiority and insecurity in interpersonal relations to white people. This powerlessness in this respect produces either apathy or vengefulness toward compensation through cunning—petty stealing, cheating, lying.

Slavery itself was conducive to a form of fatalism, an extra-punitive tendency to attribute all responsibility to outside sources. From general disasters to personal tragedies, there was nothing to do but accept what was someone else's fault or what fate brought.

On both islands, language unfamiliar to the masses was used by the whites which increased distance, limited mobility, and was an instrument of power and control relating all who did not understand it to subsidiary rôles. The natives spoke a dialect derived from slaves. At present the dialect in Puerto Rico—Boricua (which is widely spoken by lower and middle classes) is competing with English as well as Spanish.

These factors of wealth, power, language differentiation of the whites led to the formation of two-class society on each island: an upper class of wealth and security—landowners, clergy, military and public officials, people with education and social position versus a poverty-stricken lower class of peasants and artisans. There was often actual segregation in the churches, schools, public places.

The cultural dissimilarities between the islands are great. The cultural tradition, be it Spanish or English was dispensed through the national institutions—governmental, legal, military, educational, political, and religious—as well as through the uniformities of mass communication found in literature, news, theatre, art, music, recreation, and language.

4. *Cultural Differences*

In order to clarify this consideration, differences between the Spanish and English in cultural polarities will be viewed from three aspects: sexual, social-economic, and religious. These categories are, of course, general and interacting to some extent, and do not apply to the aristocratic or otherwise leisured upper classes of Spain or England.

a. *Spanish.*

(1). *Sexual.* There was a marked inequality between the male and female rôle expectancies. Males were indoctrinated from early childhood in the complex of male dominance, male superiority, male responsibility, and 'machismo' (ideal of being manly, harmlessly aggressive, sexually oriented, a free-lancing born bandit who can defend himself). The Spanish male therefore had anxieties regarding adequacy in these matters: he overstressed his masculinity and worried about his ability to provide for a large family (which must be his in order to demonstrate to the world his procreative ability).

The female complex stressed virginity and the cloistered look—modest, submissive, unsophisticated, tender, sheltered, and disinterested in sex, while physically beautiful and accomplished in the skills of household management and of child care. Her anxieties were that she might be found unattractive physically—(this led to emphasis on clothes and fear of the wandering amours of her husband)—or dread that his sexual and family burden would be so great as to form a kind of martyrdom for her. This martyr complex was intermingled with a mother complex; suffering-but-ministering, chiding-but-understanding, forgiving-but-supporting (indulging).

(2). *Socio-economic.* For all classes the Spanish tradition emphasized group solidarity, group identity, interpersonal respect, loyalty to relatives,

ritual kin and friends. The Spanish concern with 'respects' entered into every form of social intercourse. The mutuality of this cut across status differences to some extent; proper respect for position was mixed with proper respect for the person simply as an individual. Forgetting the obligation to *express* these relationships was an important infringement of the conventions of this culture.

Spanish societies in general involved a greatly extended range of social relationships binding people into ties of varying degree. It was a huge mesh, with the person in the center, controlled and controlling people to far outlying edges.

The taboo on aggression is aided both by the codes of respect and the network of relatives, ritual kin, and friends dedicated to avoid any outbreaks. This is an important stricture in the culture, and its frustration may account for the outlet into cruelty sometimes noted in bullfight and the treatment of heathen, slaves, prisoners, or other out-groups. This not only meant much social communication but it controlled economic values to a certain extent: a man's income was not to interfere with an appropriate range of sociability, hospitality, and recreation—these were not to have monetary value. Penny-pinching and competition for purposes of individual accumulation was looked down upon. Within reason, what a man had was at the disposal of his friends and relatives. Money values were not above social values, and worries were that one's money might not meet the social desires and expectancies of one's group.

(3). *Religious rôle expectancies.* The Spanish church taught a fatalistic attitude: 'it is God's will, what can one do.' To quote from Manners:

Fatalism is a characteristic directly likened with the religion—I believe it explains the infrequent complaining. Although the causes of resentment may be quite specific: bad crops, no money, no food, sickness, too many children—the expression is generally diffuse, the response perhaps drinking or a fight with one's neighbor who has the same frustrations . . . there is a carry-over of this attitude into other realms—one does not become angry with one's father, attack a patron, assassinate the political leader, or blaspheme the government, because the real causes lie beyond these human agents. And surely one does not spit on God (26, p. 128).

Here the attitude of fatalism counteracts aggression which, in any case, is not internalized.

b. *English.* A consideration of the Anglo-Protestant culture on Jamaica in the same three respects shows a distinct difference from the Spanish-Catholic culture.

(1). *Sexual*. While it was the Victorian family ideal of the English lower-middle classes which was brought to Jamaica, the conventional centrality of the male was more nominal than actual. The man was "supposedly" dominant and superior but in practice there was equality in the home, the schools, in public and, before the law. Women were not subjected to the double-standard, cloistering abuse, or excessive domination. The English middle class pattern of shared authority of parents and equality of sexes when adopted by a very simple rural lower class such as the Jamaicans resulted in a confusion over unclear rôles. This inconsistency was due to poor understanding of the well-integrated Victorian family rôles, and possible conflict from being overlaid on earlier Indian-African-Spanish rôle expectancies.

(2). *Socio-Economic*. The English culture prescribed a monogamous nuclear family as the only group to which an individual belonged and owed allegiance. There was a considerable psychological distance from all others who were outsiders, to be neither given nor depended upon for more than a superficial relationship. There was no responsibility for the well-being of others, except in an ethical sense leading to general charity and benevolent enterprises. Even within the family, emphasis was for individual strength and self-reliance: it was not good to need much help from one's brother, not good to be dependent for social or other control on one's relatives. Individuals should be upstanding and self-reliant within themselves, and this 'integrity' was to be achieved through clear thine-and-mine, give-and-take distinctions. In other words, rôles were rigidly defined, and infringements taboo'd as 'unfair,' unsporting, and socially punishable. An intricate ethic grew up as to what constituted taking advantage of the other person and what was allowable within the rules. Economically, the way to being upstanding and non-interdependent was through initiative and hard work, thrift, and budgeting. Security as centered within oneself and a lack of concern for others' welfare led to a devil-take-the-hindmost competitiveness. Activity directed toward gain and austerity towards its sober preservation resulted in the criterion that lack of prosperity indicated lack of energy or wit. Hence, the interest in—and anxiety for—conspicuous consumption in accumulation of possessions—land, housing, furnishing, clothing, etc. Social-economic goodness consists in love of spouse and children, increase in financial stability, fair-minded consideration of others' rights and privileges, civic service, generosity to remote charitable enterprises.

(3). *Religious*. Interrelationship between religion and Capitalism is analyzed by Weber who refers to it as the Protestant work ethic. The

individual was obligated to God to increase his capital—in the sense of abilities and property. He was by self-sacrificing hard work to make his goods grow to the glory of God and preserve by avarice any lessening of this gain. His character was also directed toward growth and better quality, and he prayed to God for guidance against any forces which might lead to undermining his firmness and dedication. Hence the strictures against wine, women, and song.

The Protestant abolition of Maryology, papism, and saint worship made man's relationship to God more direct and closer. Because the mother-figures in the form of the Virgin Mary and female saints were removed in Protestantism, dependency and care were expressed in terms of a male god. This formed an area of psychical uncertainty between a biological mother and a spiritual father both of whom in the Anglo-Protestant culture are considered rewarding and punishing almost every function. The concept of evil as self-caused, led to the internalization of blame in the form of guilt or shame. The Calvinist tradition had no provision for the forgiveness of sin—it was cumulative and unexpiable and in no way excusable on the basis of group norms. The causality of good and evil, being internalized became matters of reflection and scrutiny leading in the broad sense to a scientific attitude which probed the reason for social and economic as well as individual inadequacies.

Self examination led not only to inner-directness but a general specificity of outlook: situations were seen as man-created and analyzed for faulty manipulation of environment. There was no passive acceptance, change for the better was a constant possibility, failure a matter which could be remedied by more effort or more ingenuity. People prayed for strength rather than for acceptance.

c. American. The American period in Puerto Rico has overlaid our cultural values on the Spanish pattern. These values of hard work and development have brought this land closer to Jamaica through improved education, health and sanitation, transportation, communication, and industrial facilities. There is now more emphasis on competitive individualism, on equality of the sexes, on action-for-change-for-the-better whether on a personal or on a group basis. The concept of group action, so native to the English tradition, has been hard to transplant—the people do not support locally elected leaders as their own, there is no tendency to identify with government representatives as part of themselves: the idea is not comfortable due to cultural lag of patron allegiances or decentralization of dependency in a wide social milieu. If leaders are accepted, it is with a dangerous

uncriticalness. They believe people in power are beneficial, per se, and not to be questioned because they are too poor and uneducated to judge. Even when local leaders are obviously of equal status, the experience or even orientation toward group-decision-making is absent (32, p. 403).

C. COMPARISON OF RURAL REGIONS AND SUB-CULTURES

1. *Rural Lower Class*

Manicaboa in Puerto Rico is high in the mountains where small farms barely provide a living from fields on which the entire family works. These people are peasants in a large area that also includes some middle class farmers, agricultural wage laborers, and hacienda owners. Families grow some tobacco and coffee for petty cash and these crops augment the corn, sweet potatoes, beans, and rice grown for subsistence. It is a marginal economic situation because the living is dependent on unproductive land and precarious crops.

In Jamaica there is information from anthropologists on child-training in four subsistence-economy areas, (a) Rocky Roads (Cohen), (b) Mocca (Clarke), (c) Negril, and (d) Farquhar Beach (Davenport). These are all small villages—Rocky Roads 277 people, Farquhar Beach 194 people, Negril 219 people, and Mocca 181. Rocky Roads and Mocca are in the highlands where the land is so meager that the people are barely able to make a living. Each family has a little plot—either owned or rented—which is worked for crops. These usually consist of bananas, coconuts, peppers, sugar cane, corn, yams, potatoes, beans, and peas. Some small stock is raised such as a goat, pigs, chickens. Houses are thatch with dirt floors and no improvements. Negril and Farquhar Beach are also both lower socio-economic level (Negril slightly higher) but their main subsistence is from fish augmented by crops and husbandry. These four communities have little contact with the outside world, people seldom leave, outsiders seldom enter. There is great homogeneity of outlook and values.

In Manicaboa, the father is unquestioned head of the family, he bears the total responsibility for its welfare. There is fear of starvation, and yet "work is not a value in itself and the work-day is not routinized" (32, p. 403). The father is admirable for his endurance as a hard worker but also for his hospitality and his social dignity. He shows by example the taboo on aggression by joining his friends in circumventing such expressions among others, and in emphasizing the important nuances of respect in all his contacts. The need for mutual aid among the members of his wide social circle involves him in exchanges of labor shared by his children. Thus the

children grow to realize that by and large inter-personal relationships are extremely important, and based on control of aggression, respect, and the give-and-take of favors. They see that social mores, learned through precept and gossip, form the base-line for behavior. He is an authoritarian figure, gentle and indulgent to his little children, strict and punitive to the older ones.

The mother is servant to the father in the fields and at home, and the stringent living taxes her strength to the utmost. Nevertheless children are wanted, warmly received, and gently cared for. Infants are breast-fed immediately on demand, and until the next baby intervenes. Mrs. Wolf notes that while the babies are fed as frequently as they want, it is for only a few minutes until the first sign of relaxation. This of course amounts to oral frustration. It is the writer's opinion that both Mrs. Wolf and Yehudi Cohen have overlooked the fact that in subsistence communities where physical strength is demanded of mothers for crops, generous nursing would be enervating. Even in communities like Rocky Roads where the fear of starvation is based on very infrequent famines, and the land is productive enough to give a more-than-marginal living without much help from women, not many generations ago the land may have been undeveloped to such an extent that women's strength in agriculture made a noticeable difference between subsistence and starvation. Hence, it may not be that mothers are ambivalent about nourishing their children but rather see restricted nursing as a means of fulfilling their dual rôles of provider. Mrs. Wolf says: "It was common for women to maintain that breast feeding weakened them and that the infant was sapping their strength, especially since they themselves lacked rich and strengthening foods." Since such factors do not put a limit on maternal giving in all cultures, here it is a form of female narcissism and rejection of the most basic nature, revealing the woman's unconscious ambivalence regarding her rôle (32, p. 408).

The care of the baby is good and kind, the mother always about and ready to respond. The baby is cared for also by older sisters. As it begins to move about on its own, it gets freedom encouragement and little restriction within the warm family atmosphere. Fathers play with and cuddle the little ones during their times of relaxation. Stycas, in interviews with lower-class families (both rural and urban) noted that children seem to be for the fathers' amusement rather than the opposite. Landy says children are treated by their fathers more as toys or dolls rather than personalities in their own right until copacidad is achieved around the 12th year. At any rate, fathers are respected for their authority, seriousness, and responsibility. Gradually

small tasks are given, the girls learning house and baby care whereas boys have a round of chores which takes them more and more outside the home. There is no urgency. Much patience, little chiding, almost no physical punishment. Small skills are encouraged, especially if they are towards making saleable wares to bring in a few pennies. Ego-satisfaction is gotten through mastery and recognition of what the child does well, and frustration is tapered by the lack of harshness concerning misdemeanors. Any acts of aggression which do occur appear to go unseen. The generally low-tension level is noticeable, wife-beating and corporal punishment being very rare. Respect, honesty, non-aggression are positively taught in every context, and these controls bring the sibling rivalry and petty quarrelling to a minimum, both inside and away from the home. The siblings closest in ages tend to be paired off—in chores, in play, sleeping arrangements—so that mutual dependency grows from the "buddy system." It might be said that independence training is not forced but it occurs within a social context which encourages yet forms, a function performed by as many people as live near enough to visit and be visited in this mountain community. As in Spain, the farms are clustered, in contradistinction to Northern Europe and America where farm communities spread as if unafraid of independent living.

When the child is old enough to be useful in the fields, his labor-potential is taken over by the father. This is the first limitation on his autonomy because adherence is obligatory, and the hard long hours confining. However authoritarian the father actually is, the members of the family live and work closely enough with him to realize the necessity for his attitudes, so that only occasionally is there any rebellion. Here again, strongly aggressive action by a son may go unrecognized or even secretly admired as manly.

Girls are not evaluated as highly as boys: economically they are not as valuable for agriculture, and they bear a lower status generally. While some sex knowledge is obvious in such crowded housing, the boys learn at first-hand outside the home what the girls learn only through gossip. And the women talk of their sex and child-bearing rôles obliquely—as sad, as dangerous, as painful, as unenjoyable, as obligatory, as necessarily submissive. Thus the girls, while not 'cloistered,' get the martyr complex—that women are long-suffering unwilling victims of men who are better, stronger, more rational, more shrewd, and more evil. This attitude on the part of mothers must also be conveyed to the boys who have a strong emotional bond for their mothers which, with this martyr complex, tends to give their mothers a halo that their wives never have for them. Stycas says the devotion of boys to mothers carries over to a process of desexualization of the wife and

a brittle relationship held together only by religion and male dominance. He also notes a tendency to use impregnation as an act of hostility—a means of tying the wife to the home. Children are wanted as an economic asset, and as a form of conspicuous consumption: the more children a man can procreate and support, the finer man he. The preference for male children is not only economic, because men who produce only girls are teased. Mothers prefer girls because they remain in the home being humble, obedient, and submissive whereas boys become independent roaming about, and if they disagree with the parents too strongly will leave home. Fathers give girls more attention and feel more protective and indulgent toward them because they must be kept soft and tender whereas the boys must be hardened and disciplined for an adventurous rigorous adulthood.

In Jamaica the four communities of Rocky Roads, Mokka, Negril, and Farquhar Beach show a consistent though different pattern of socialization. There is only a small percentage of Christian families sanctioned by the Church, the predominating kind being either consensual unions of some permanence or 'housekeeper' arrangements for short terms. Pregnancy usually precedes any form of living together with the result that for example, in Rocky Roads 62 per cent of the children are illegitimate and 63 per cent have at some period in their lives lived with their maternal grandparents. People have generally had three to four living-partners before settling into a permanent relationship. This means that often the children have had as many homes, and that their earlier little years were not spent in a nuclear unit—rather with whomever their mother was 'living a sweetheart life' or with grandparents who assumed—and possibly resented—the burden of little ones. Under such unstable conjugal unions the dominance relationship in the home is unclear: the mothers and children can be abandoned by the fathers without social sanction at any time although the man always contributes to the support of *his* children. If this happens, the mother-child tie solidifies—she assumes the responsibility for their support and welfare, and, if necessary returns to the only relevant kin for the family, namely herself. When the conjugal union is satisfactory, the father provides and makes the major decisions and the family is often a stable unit. However, there is a psychological power shift that affects all members of the family: the children realize that when the chips are down they really belong only to the mother. The father realizes this also, and he sees any sacrifices for them as having an unnecessary or an impermanent value to him: society does not view his children as his life-long burden and responsibility, rather as persons he can weigh for acceptance or rejection in terms of what they are worth to him.

The mother does not have to accept an intolerable situation because she has recourse to other means of caring for her children: since the father is obliged to support his children whether he lives with them or not, the mother can—with a little outside work such as cooking or washing, ironing, mending for bachelors—get along without him. This may be a period of deprivation that means insecurity for all concerned, but it does produce a form of economic independence for women that is not found in Manicaboa. Both Cohen and Davenport report quarrelling and fighting common between parents, and airing of grievances before the social jury—i.e., the gossip bench. At home conversation between parents is minimal until they go to bed where most of the talking takes place.

The fathers, therefore, try to avoid having children for as long as possible—the average age of marriage is late, between 25 and 30 years—and are disinterested in the children: feelings range from a detached neutrality to resentment-to-hostility. Interaction between fathers and children is harsh and apt to cause fear in little ones and active dislike in adolescents who have to work with their fathers in the fields or fishing. When the work day is over, the men tend to form into groups for talk or playing dominoes, and the offspring are excluded until they are old enough to be accepted as adults on an equal status.

The mother is therefore the central figure to the children. Physically and psychologically she is close to them, a warm bond existing in spite of a constant round of nagging and abusive talk. She is the dominant parent in both gratification and frustration. As in Manicaboa, babies are nursed briefly—possibly due to subsistence farming. Emphasis on food is extreme—for example, gobbling, hoarding, stealing, and practical jokes involving food are frequent. The child is impressed with the importance of having food and of having land which produces food.

There is a strong willingness on the part of mothers and society in general to be punitive toward the children. Babies often cry an hour or so before being fed, or if they cry at night they are never fed. Cohen reports no fondling while nursing—the mother goes about her work at the same time. Babies are slapped if they bite while feeding. Slapping is the general form of discipline until a child can walk and after that flogging for any behavior which irritates his mother. Major offenses are reported to the father for switching or strapping after three years or when there is no father, the maternal grandmother is the punishing agent. Toilet training is begun at three years, at five years the child is slapped for mistakes and at seven he is beaten.

The learning necessarily involves the realization that the mother's ego-satisfaction is paramount, that she is the main channel for determining punishment—although she does not actually execute the major punishments—and that she is the only source of reward. This causes emotional inbreeding and, where an illegitimate child is rejected, may amount to emotional sterility. The only mitigating factor is the devotion which grows between siblings and between relatives of the same age, and which is an interdependent relationship maintained through life. The chores which children do are never praised, always criticized to give the idea that there is always room for improvement. Floggings are heavy and given to even the smallest children for the smallest misdemeanors. Girls get flogged more than boys because they are about the household more. The underlying attitude is that children are naturally bad and aggressive, and must be bent. Aggression is a natural result of the frustrations caused by punishment, and there is much concern over the danger of expressed aggression, so that any tendency toward it is severely dealt with.

Independent behavior is curtailed from the beginning. Little children are kept close to the mothers and as they get older close to the home. Play outside the house for children under 5-6 years is within the yard. Siblings or relatives are expected to play together and not with outsiders who might teach them bad ways. There is very little contact with neighboring households, no freedom to run in and out, few visitors coming or going. This isolation tends to produce an unoccupied, unexploring, aimless childhood centered around complete dependence on the mother. Another product of isolation is an attitude of fear and suspicion of all persons who are not relatives, a feeling of being in hostile company.

This complete dependence pattern is continuous for girls from childhood through adolescence. The desire to evade it accounts for many unconscious minor acts of hostility toward the mother (such as breaking, hiding, stealing things, lying) and for many ill-considered elopements. When a girl does marry the submission and fear she felt for her father as a supporting though punitive agent is transferred to her husband, yet she has also absorbed some of the equalitarian attitude of her mother for her father. Hence the bickering, the dissatisfaction, the tendency to seek individual sources of income by raising and selling small produce.

The dependency pattern begins to be relaxed for boys at about five to six years, when they gain some freedom to wander about the village by having to run errands, tend animals. If his independence makes him objectionable, his mother or grandmother may refuse to cook for him—a reminder of his

ultimate dependency on women. At 10 years, the boys begin helping their fathers with the field work, learning to cultivate, harvest, and raise livestock. Neither boys nor girls identify with the father in spite of the fact that he supports them, and for boys, he assumes equal control over them beginning at the time when they join him in work. The basic dependency relation to the mother is too strongly established by 10 years to be modified. Mothers cook, wash, sew, and care for their sons through the many extra-marital affairs, it being said that a man never *wants* to set up another household until his mother is dead. Finally, the number of illegitimate children he has to contribute support for, the need between long-time sweethearts for an independent existence, plus pressure from his relative that he provide for her, leads him to break from his childhood home. However, he always carries the feeling that some of his emotional and financial loyalty belongs to his mother. Between the years when he first began to work with his father (at about 10–12 years) and his ultimate establishment of another home in the late twenties, he has much frustrated and listless leisure. The society indicates that possession of land to produce food should be the focus of his life. His family generally starts this process by letting him have a small bastion of land and a pig or a few chickens to raise and market himself. A portion of the profit goes to the family, a portion he may have to begin accumulating a sum with which to rent land outside the family holdings. This process is so slow in such poverty-stricken economies, that the satisfactions derived are meager and frustrating. As a peasant-type who has had the need for economic independence grafted on to strong home dependence, who has been taught mistrust for all non-relatives, he cannot easily make a break to freedom beyond the village.

School learning in Jamaica, while it comes under the excellent English pedagogical system emphasizing clarity of expression and facility in basic learning, involves a value system remote from these subsistence communities. Victorian poetry, piety of and prudishness about sex, English songs and games, the tenets of a capitalistic society—rugged individualism, forceful competition, opportunism, long-range planning—are meaningless to the children. They are taught with the rod the principles that aggression, lying, and stealing are wrong yet parents brutalize children and a mother will take her child with her to steal someone else's coconuts, tether a cow or goat on someone else's pasture, or gather firewood from someone else's land. Adults often start by saying "I cannot tell you a lie" and then go on to some obviously false explanation (3, p. 157, 158).

Adolescents witness the duplicity of adult behavior in regard to money;

since economic stability is the focus of life, and since indigent relatives have a right to lean on the better-off relatives, the latter take precautions not to flaunt any gains lest they be 'milked.' In fact they try to hide any signs of prosperity and talk poor, complaining constantly of bad luck with crops, family illnesses, expenses, etc.

Another form of dodging reality as well as a form of dependence which children and adolescents learn from their parents is the relationship with the obeah man. Belief in witchcraft is widespread, due to insecurity over death (their religion teaches no forgiveness of sin) and insecurity about all non-relatives. Resistance to intrapunitiveness is the result of non-independence because a dependent person views all good or bad happenings as being done to him—rather than by him. These people attribute misfortune to the jealousy and purchased magic of some neighbors; the other guy has been to the obeah man and put a spell on him, hence the only relief will be to pay an obeah man to find out who it is and counteract with stronger (more expensive) magic.

Sex training in these Jamaican communities does not follow dependence-independence patterns. It is relatively unimportant. Mothers shelter their daughters so that pregnancies will not produce too many mouths to feed—thus undermining economic security—and there is no emphasis on masculine-feminine modes of behavior, virginity, or fecundity. Parents who do not produce children are pitied for this reduced labor team in the fields. This casual attitude toward sex results in there being no tension in this area, a purely economic point-of-view in selecting a mate; can the woman add to a couple's income by small skills or hard work, is a man a good prospect because of savings or strength, or knowledge of agriculture.

2. *Rural Lower-Class Wage-Laborers on Plantations*

Puerto Rico and Jamaica can be compared for socialization patterns in two sugar-plantation communities where the type of economy necessitates large amounts of capital and equipment, and the marshalling of a huge work force to bring in the cane before it spoils. Six to eight months of the year there is little activity in these communities—in fact a state of depression often amounting to near-starvation exists until the agricultural cycle begins again the tremendous boom and prosperity from returning wage-laborers. These incoming hands are bachelors who either move around the islands all year or men who have a family and pied-a-terre somewhere to which they go during off-times. There is, however, a small community which lives on the sugar plantation the year round, and it is these which will be compared.

The people own no land and rent shacks from the plantation holders—whether private or government operated. There is over-population even out of season, and some under-employment even at crop time due to the influx of migrant workers. Store-buying prevails. The fact that these cash wages are paid for only six months of the year means that commodities are bought on credit, often at a general store owned by the people who own the land-factory combine. The population is nearly equal in economic and social status, there being very little upward or downward mobility. Sidney Mintz says, "the seasonality saps initiative and results in a planlessness in living" (26, p. 321). On all these plantations there is hostility toward the owners or corporations, the expression of which among the workers tends to channel off aggression. The Puerto-Rican pattern is diffusion into many face-to-face groups, the Jamaican into personalized grumbling, but until very recently, individual action in the form of political leadership of opposition or group action in strikes was unknown, and no rebellion had ever taken place.

In Puerto Rico socialization on a sugar-plantation type of subculture is reported for Barrio Poyal by Mrs. Kathleen Wolf and for the community of this region—Canamelas—by Sidney Mintz. There is evidence from Mocara, a government-owned plantation run for the benefit of the workers, and reported by Elena Seda Padilla.

In Poyal and Canamelar, there are, for the most part consensual unions some of which are unstable because they are formed during the boom time of high living and high hopes only to collapse with depression. Most consensual marriages last, and although much sexual experimentation precedes any definite arrangements, once established the partners are faithful and if not are disapproved by the community. There is some easing of the rigid paternalism of Manicaboan ways accompanied by an alignment of relationship along the female line. In extreme trouble such as a man having no work, the family looks to her relatives for help. (This seems to be the result when an economy makes a man's support of his family something that cannot be counted on. In a sense, the woman when she knows she is marrying into an unfirm situation—due to fluctuating wages—never entirely leaves her home, psychologically, and keeps the path open for desperate retreats.) If the man goes off permanently the woman and her children look for another man to support them. This is not hard in a community where there are many migrant males easily susceptible to the warmth of a home. The father is less of a patriarchal figure than in Manicaboan—his distance from his wife and children is much closer, much warmer. He is the head of the family, earning the total income in cash wages which are used

at the discretion of both parents. The women in this community find no means of earning money and are in no way an economic asset. This value is strictly that of companion and bearer of children—and in their respect they have status. Children are wanted for no other reason than that to have lived without them is to live unfulfilled. Since the man is at home half the year without employment, both parents divide and share the rôle of rearing the brood; fathers help with some household tasks and take part in handling the children's routine. There is a rapport between fathers and their families which the Manicaboan father never has because he maintains the awesomeness of his authority, although here also the man is dominant and decisive. There is an intimate give-and-take that leads neither to extreme dependence nor to rejective independence. Both mothers and fathers are loving and disciplining so that emotional relationships are more diffused and unclear.

Mothers nurse generously and with affection. They wean as late as three years. Babies are cared for with pleasure, not only by the parents and the older children but also by the continuous stream of relatives and friends who stop in. There are no tensions—no routines, no corporal punishment, little toilet training (girls earlier), no forcing. Sibling rivalry is lessened by the family program of coöperation and the ban on aggression, any expression of which is considered poor form. Mildness in all social relations is admired. As the child learns to walk he plays with whomever he likes and is free to wander in and out of neighboring houses where he receives the same cordial treatment that visitors have in his house. He gets to know lots of people because the houses are close together and overcrowded. It has been pointed out that many of these children have several mother-figures (grandmothers, aunts, females who like them to whom they are 'loaned') and several father-figures from a variety of step-fathers, and that this lessening of intense relationships in early years may make for more shallow emotional attachments in maturity. The many social ties of every child, due to many relatives, close neighbors, are further amplified by the various systems for forming compadres or ritual kin. These amount to pacts for mutual aid, and become a network of people for and from whom there is obligatory respect and concern at all critical times in each other's lives. The children apparently willingly do the small chores leading with practice to small skills, though there is sex differentiation—girls doing more of the tasks associated with care and cleanliness. Girls are involved most of the time at home though they are free to go about to neighboring houses. Premarital virginity is desirable, but there is little care or protection other

than to teach girls they are the agents of control for men who are always ready to take advantage of them. Boys are admired for any show of masculinity or outbursts of non-aggression forcefulness, whereas girls are taught to emphasize modesty and de-emphasize sex. Boys have no real usefulness until they are 16 when they can compete for work with the men in the cane fields—here they are at a disadvantage for a while though they very soon draw the same pay as their fathers and begin to consider setting up households of their own.

In this plantation type subculture of Puerto Rico, the dependence-independence training is less intensive. There are hardly any growing pains, most causes of tension being absorbed by the huge social network in which the child grows; if he doesn't fit in one household, another is found where he does, etc. He never gets a chance to be a 'square.' If he gets into trouble, a team of compadres rushes to his rescue, all intent on bringing matters by persuasion to a non-aggressive and agreeable end. Although Freud's definition of the healthy person as one who can love and work fits most of these people, there is reference to some who cannot form deep attachments and seem to float through life on the social surface.

There is a certain absence of conflict, a blandness, due to the huge social network bringing all excesses back into equilibrium, the complete equality of status and economic opportunity and the fatalism in thought. Here we may think of the emphasis in learning theory on the importance of a certain amount of frustration as a necessary element for greater development.

Sugartown is a plantation factory-town and estate reported by Clarke and Kerr. As in Poyal, there is violent fluctuation from boom to depression, housing is shabby and overcrowded, consensual families are the rule; in all respects this classless community resembles the Puerto Rican one except in the psychological relationships of family and child care. Parents are noted for constant quarrelling, and for violent upsets to home life—the father ejecting the wife and children, or bringing another woman into the home. Children live in constant danger of the disruption of the closest ties, and their fear of seeing the mothers turned out makes them hostile to their fathers. The fathers are harsh and neglectful toward the children. These conditions are critical for the children because of the importance of the nuclear family. These children do not have the social web of the Spanish-culture home because the majority of the households are tight units without the constant or intimate contact that the Spanish-type household has with relatives and neighbors.

In Sugartown the mother has all the responsibility for reward and pun-

ishment—the father only shouts (3, p. 156). There is no cruelty but there are violent floggings, even for the littlest ones. There is constant nagging and threatening of children, much brutal shouting to which the children reply in an equally noisy, violent manner. Mothers pursue unimportant tasks while infants scream. Stealing, particularly of food, is an important offense. Dreary as this scene is, Clarke feels that the constant companionship and interdependence of mother-with-children is warm and stable although it appears to be threatening. The harshness of attempts at discipline, the demands for exacting services are spasmodic, and interspersed with affection and indulgence (3, p. 158). This tenderness and intimacy must exist because she finds little adult criticism of mothers by men or women whereas most agree that the fathers are resentful or over-strict and remote. Schooling again is relatively meaningless, discipline is corporal, and at 14-15 boys are expected to earn a living, always giving a portion to their mothers. These young boys are for a while at an unhappy disadvantage from age and inexperience, but the way to independence is as hard as for the boy at Rocky Roads, Negril, Farquhar Beach, or Mocca.

There is dependence on magic similar to that in the four rural subsistence communities. The extrapunitive tendency is again noted. M. Kerr finds the Jamaican pattern to be "I am ill, it cannot be my fault, therefore someone else is to blame" (14, p. 167). She says this shows their guilt can be alleviated, that it does not become internalized because it lacks a father-figure. Since fathers are either shifting or rejecting or both, there is nothing for guilt to center about.

Kerr found a progressive deterioration in personality structure as a result of testing children with Rorschachs, Lornenfeld Mosaic Tests, and a new projective drawing test developed for use with Negroes. The younger children were more spontaneous, creative, gay, full of movement and life but these qualities begin to diminish at about age 12. She also noticed defective control of emotional forces and a steady increase in introversive and constricted tendencies.

3. *Rural Middle Class*

In Puerto Rico, rural Tabara as reported by Manners (26, p. 93) shows that increased economic ease brings better housing, food, clothing, and more schooling. Class differentiation begins to form on the basis of occupation and stricter conformity to Spanish-culture mores for manners and morals. The emphasis on marriage and disapproval of marital infidelity yields greater security for children in a material and a psychological sense. Little ones

are reared in more comfort, the family often having as a semi-servant some child from a relative in an outlying lower-class family. This is a form of social mobility because these children usually receive supervision, education, and belongings equal to the sons and daughters while paying for these privileges with work in the house. There is a continuation of the Spanish values which are the common denominator of both subsistence and plantation lower-classes; fathers honored by their wives and children, tolerance and kindness in rearing, all social relationships both softened and strengthened by the subtleties of 'respeto' and the intricacies of the *compadre* system for ritual kin. In adolescence, boys often have the advantage of their father's prosperity in being able to attend technical schools rather than being unoccupied or working under some hardship condition as the lower-class boys do. For girls there is tighter control on their independence because there is more value placed on virginity.

In Jamaica, information about rural middle-class life has been supplied by Clarke and Kerr. Although there is little detail about child-training seemingly they find it parallels the lower-class pattern so closely as not to be worth differentiating. At Orange Grove, a community of citrus fruit farmers, there is—as in Tobará—an increase in the stable forms of family life: 75 per cent marriages and class disapproval of poor families with consensual unions. Longer schooling and some opportunity for specialized training is likewise found.

D. COMPARISON OF URBAN REGIONS AND SUB-CULTURES

1. *Urban Middle Class*

In Puerto Rico, a sensitive study of family life in the town of San Jose was made by Kathleen Wolf. Certain Spanish upper-class values have sifted down and conflict with lower-class values. These are aggravated by an economy where there are many kinds of jobs, many ways to make and spend an income. Men have wage work which does not involve their masculine strength; and a tendency to masculine assertiveness is counteracted on the job by a minutia of regulations and restrictions. Work is not as simple and secure as in Manicaboa, or in Canemelar at boom time; there is, of course, upward and downward job mobility and varied kinds in any pay bracket. An inversion of the lower class admiration for work strength occurs in the admiration for a man who can draw pay for doing as little as possible—for having tenure or a sinecure. This attitude is fortified by the upper-class ideal of indolence and the 'machismo' admiration for the

cool guy who can get away with harmless mischief. However, men's dominance is continuously threatened by job insecurity. It is further threatened by the many opportunities for women to be employed. Husbands often need the money their wives can earn while experiencing hostility toward other aspects of her working, her increased freedom from their home, her financial independence and her feeling of power.

The complexity of urban life offers the man a diversity of ways to amuse himself, few of which tap his physical strength and many of which might be considered attractive vices for a machismo, such as gambling, drinking, mixed society of a low order in cafes and nightspots. In contrast to this, marriage appears a *better* life, a wife a *better* woman. Instead of marrying for 'kinder, kirche, and kinter,' men view marriage as a step toward improving their better natures; they thereby give up vice and freedom for slavery to an ideal—something which they unconsciously resent.

Women, while valued for their economic potential as in Manicaboa, are resented for their increased autonomy. Otherwise they conform to the traditional Spanish ideals of being sheltered, and being sexually unsophisticated (even non-sexual) in behavior while being physically attractive and dressed for show. The prevailing attitude toward men is that of a mother to a naughty boy: she understands him, she controls him, she condones and bears with his rebelliousness.

Man is, therefore, no longer secure in his dominance at work or at home. Because of the ban on aggression, he can express frustration only indirectly, as in drinking bouts, mild gangster-or-club routs, electioneering, spiritualism, or conversion symptoms. Women have more reaction formations than men, possibly due to more deep-seated sexual mortification. This discrepancy between the conventional Spanish *ideal* of the man-woman power relationship and the *actuality* is a source of insecurity to men and dissatisfaction to women, and the frustration it incurs appears in adaptive mechanisms: gossiping, psychosomatic illness, excesses of one kind and another.

An understanding of what happens to nurturance and independence training within this complex Puerto Rican society will be aided by comparison with lower-class practices. Many elements are the same: (a) Children are wanted, boys especially by fathers, girls by mothers as a justification of masculinity and fecundity. (b) Father is a partially authoritarian figure, to be obeyed and respected. (c) Mothers are all important in child training, fathers taking no part in it. (d) Maternal grandmothers are important, often involved in being multiple-mother figures. (e) There is care and kindness for every need of the little child, a low tension level for training. (f)

Large network of relatives and interested friends. (g) Respects emphasis. (h) Interest in sexual potency. (i) Taboo on any form of aggression.

There are great dissimilarities between lower and middle-class practices. Mrs. Wolf attributes these to bi-cultural conflict between traditional Spanish and new Latin-American influences. A simpler explanation can be found in the greatly increased size of the society and the manifold of activities it offers. Differentiation of jobs and services brings class structure not possible in subsistence or plantation economies. There everyone does the same kind of work. Insecure class structure produces activity for stability or upward mobility by means of education, manners, morals, conspicuous consumption, color snobbery, servants, or any other prestige factor.

Whatever the cause, the situation is clearly different from that in Manicabo or Canemelar. The more modern center offers new theories of baby-care, the acceptance of which marks mothers as out-dated or enlightened. Government instruction about hygiene, the possibilities for bottle-feeding, cleanliness routines, medical check-ups, sleeping schedules, and toilet training all contribute to concern over proper handling and rejection of the ways of grandmothers and of the country girls who are nursemaids (usually 12-16 years of age). From the start the baby is thought of as a passive object to which this or that should be done. This contrasts with the lower-class mien of the baby which needs attention only when it demands attention: otherwise it can exist and manage by itself (subject to the watchful safety of adults). Here the passivity is forced upon the infant and continued to some extent through all his growing years. He is fed until he is three—no messy playing with food. He is washed and his clothes changed so that there is no fun in dirt or being grubby. He is supervised by his mother or his nursemaid constantly—all his desires are anticipated and any independent action thwarted by his being immediately satisfied or distracted with songs, cuddling, bouncing. He is never left alone, even at bedtime his mother generally stays in the room with him until he falls asleep. He uses tantrums and moods as a means of control but he is praised for his passivity. Mrs. Wolf says he learns early the dichotomy of behavior between being clean and proper with his mother, a little object to be proud of, and being messy and poorly behaved with his poorly brought up nursemaid who is no older than an elder sister to him. "Soiling and carelessness in external appearance become associated with social criticism, rejection by the mother, indulgence of impulses, and relationship with a female figure of lower-class status" (32, p. 406). This induces the circular ideology produced by urban life.

The dependence pattern is maintained strictly for girls and consistently

with boys with one exception; they are allowed to roam in small gangs from the age of 6-8 on. Neither sex does any chores nor develops any mastery skills about the house. Education usually is through high school and often college.

Sibling rivalry is intense because there is great preparation and anxiety over new babies and no opportunities for children to help in the care for baby brothers or sisters. In Manicaboa and Canemelar, when a new baby displaces an old baby, the mother's rôle is taken over by an older sister rather than by a disinterested maid. Separate toys and equipment are given to each child so that a sense of property develops and results in the quarrels which anticipate the competitiveness of adult life. The treatment of children as passive objects who must be kept clean and under control occurs the world over when prosperity and available servants make it possible for families to have nursemaids. This is no different in urban middle-class Puerto Rico than in Vienna or New Delhi. The other aspects noted by Mrs. Wolf develop out of the same dependency pattern. What is important here is her observation—however universal—that changes in occupation produce changes in child training and that these changes do not obliterate the Spanish culture pattern of wanted children, father dominance, maternal ties, social web, emphasis on sexual potency, respects, and taboo on aggression.

Unfortunately very little information is available about child training in the urban middle-class on Jamaica. Henrique says there is stress on religion and propriety very similar to that of the Victorian lower middle-class. Families are paternalistic and monogamous, with authority resting in the father and general subordination of women. The servants are school-girls and school-boys who are peasant kin. Besides church going and proper manners, the next emphases are on good housing and ability to trace ancestors, especially to white people (15). The only comparisons that can be inferred between this class and the Puerto Rican are:

1. Church going becomes a class differentiator here as it is not in Puerto Rico. It is not taken for granted, as in the Catholic communities, but is a positive act implying free choice and therefore involving tension. Children should feel differently where the family chiefs say "This is the day we go to church" as contrasted to their saying "We must go to church today"—the former is an accepted action, the latter an obligatory, forcing action.
2. Propriety also becomes a class differentiator instead of being a *sine qua non* of all classes as in the Puerto Rican *respeto* system. Thus manners,

instead of being a basic necessity, become a matter of free choice in which it is *better* to be well behaved.

3. Paternalistic families mean a cutting loose from influences and connections with the wife's relatives and the greater autonomy and responsibility of the man for his family. For children in Jamaica versus in Puerto Rico this means a greatly shrunk social orbit for experience and dependency, less opportunity for multiple mother figures, diminished emotional diffusion. Therefore, emotional ties to a narrower family must either become deeper, (more dependent in early childhood, more wrenching to form into independence later) or become blocked where the child is starved for affection by the employment of maids, sending to boarding school, etc.

4. The ability of the father to provide good housing, i.e., property must be seen by the child as a value in itself—something which his family and others are particularly respectful of, something a man is expected to work hard for.

5. The emphasis on monogamy must indicate a certain amount of social shame and inner guilt for infringement of the code. In Puerto Rico irregularities on the part of men are condoned by the women, admired by men as expressions of masculinity and machismo tendencies. Probably the Jamaican urban middle-class child sees sex as more hidden, more 'decent.' If the father confines his sexual activity to his wife, the child must feel more secure because of the absence of parental concern on this score.

2. *Urban Upper Class*

Information on Puerto Rican upper classes in San Juan is given by Raymond Scheele (26, p. 418ff). Some acculturation of men to American ways has come about through their contact with American business, therefore the women are more apt to follow the Spanish tradition. Children are wanted, especially boys, the mother maintains close ties with her mother and relatives, there is a wide familial and social solidarity (including many *compadres*). Babies are nursed an average of nine months and although maids are common, the little children are personally cared for by their mothers and grandmothers. "The child is taught mainly by coaxing and sometimes by shaming, but the general atmosphere is one of permissiveness and security. Scolding and punishment are rare" (26, p. 435). In toilet training, some follow the Spanish casual way and others apply American methods. In spite of constant care and supervision these children are not backward in physical coördination: a group between one and three years

of age were found equal to the standards of infant activity set up by the Gesell studies. The man is unquestioned leader and dominant in the home.

Although child care is the mother's responsibility, fathers begin to teach their sons distinctive rôles and attitudes beginning at 3-4 years.

By companionship and indoctrination, the boy learns that all his behavior must be masculine, virile, machismo. As early as possible he is encouraged to have intercourse, often with the housemaid. The double standard is set forth as desirable. Girls meanwhile are taught by their mothers to be pure and beautiful, and to expect sexual outlet in childbearing.

There is an early association with giving orders, and being obeyed by underlings. His playmates are apt to be either his cousins or the children of servants with whom the inequality is strictly maintained. Much of his time is spent with adults—although to American observers he is spoiled and lacks spontaneity and exploratory drives.

After school hours, boys are free to roam the neighborhood in groups. Scheele says: "There is a notable absence of truly organized sports or of a competitive spirit. They play Indians, gangsters, and a kind of baseball, soccer and croquet, although none of these are organized. Mostly they wander about, exploring and talking constantly" (19). Boys of an older age (8-13 years) are free to explore the city alone and pursue independent interests.

Education continues through college, most of the boys and some of the girls being sent to the United States for part of their schooling. The girls' social position is clearly defined by her parents' wealth and lineage, and great care is given to maintaining this through debutante parties and proper sorority membership. She never appears in public unchaperoned. Her training is primarily social and recreational, with a sharp appreciation of status rankings.

The knowledge of what constitutes wealth and power is formed by the possession and display of valuable articles, by constant reference to boys as little bosses who will grow up to be rich men. They visit their father's business and from 6-8 years on are assigned small chores of supervision or accounting which they perform after school or during vacations. Gradually they learn the business and learn that they will some day take it over.

The San Juan upper class is close to the Hispanic tradition and shows none of the insecurities of the rising middle-class. Americanization has, however, begun to be felt in these ways: wives and husbands are socially and emotionally closer and more equal spending more time together either in the home or at the club, sports, etc., the size of the family is shrinking

due to birth control, and the lessening of ties with relatives (particularly the maternal kin), the double standard is declining, outside associations are greatly increased both for children and adults. The father lives more in the context of the home, the mother more outside the home. This means stronger father-child ties, stronger husband-wife ties, and weaker mother-child ties.

General information on urban upper-class life in Jamaica (Kingston, presumably) is obtainable from Henriques but, as with his comments on the Jamaican middle class, not much is spelled out in terms of child training. He says "the family is dominated by the father and the grandfather" (12, p. 154ff), probably again to the detriment of the wife's line. There is "not much kin emphasis" which must mean a tendency to restriction of strong social and emotional bonds to the nuclear family. "The mother is busy with social duties—tennis, bridge, parties" which means her education and background take her away from the home in the company of her husband. "The nanny brings up the child," a nanny being presumably an older woman rather than an adolescent country girl as in the Puerto Rican families. These single older women who become nannies, are, then, either old-maids or women who have lost their homes. This would make them more responsible, firmer than little nursemaids, and more attachable as mother-figures by the young child. At the same time they may be frustrated, embittered, rigid people—so emotionally impoverished as to be either harsh to the child or over-compensating by rivalling the real mother in devotion.

There is a hint of the English pattern of surface uniformity in emotional expression: "Mothers dislike any public demonstration of motherhood" and "Boarding school at eight." The continuities of affectionate upbringing enjoyed by the Puerto Rican child are systematically broken up for these children, parental rôles being delegated to the governess or nanny, the private school, or the club where children begin to "join in organized fringe activities" after the age of six. Color snobbery and class snobbery are strong: "he learns his color commands respect" and he shows "an arrogant surety about life."

"Not much religious emphasis" and what there is "mostly Anglican" is interesting on two scores: first, of the Protestant sects the Church of England is the least imbued with the Protestant work ethic because it is the closest to Catholicism. Secondly, it is the most indulgent toward sins of the flesh, and Henriques states that families may be either a monogamous household or a twin household for mistress and love child. Oddly enough, he says the middle class approves of twin households because the children receive better education than do middle-class children.

E. THEORETICAL ORIENTATION

To systematically explain the behavior of people in complex social situations, it is necessary to use learning theory amplified by psychoanalytical and personality theory. The basic paradigm is the same for all: energy potential, stirred by inner needs, strives through behavior to achieve a satisfactory state. (The hungry baby cries for food.) Each time the individual achieves its purpose, there is a bit of learning and a temporary easing of tension. (After a meal, the baby no longer cries for food but it has formed a memory-trace for the easier recurrence of crying as a behavior leading to food.) The simpler drives for food, water, sex, avoidance of pain (which the baby is equipped with at birth) are soon conditioned—transferred—to form new drives, new responses, and new aims. If the mother responds to crying with cuddling as well as nursing, the baby develops a dependency drive to be cuddled-by-mother. Whether all drives form hierarchically over the biological four, or whether some become active with maturation, is not clear. However, satisfaction for the elementary drives is necessary before the more complicated ones can be formed. Frustration, through withholding of reward or through punishment, is an important and inevitable factor in learning. No child is ever completely satisfied all the time, and when his drive is blocked, the energy seeks outlet in a substitute activity which may be a defense mechanism or a form of new learning. Conflict occurs when there are two drives operating in the same situation. Experiments indicate that the resulting conflict-displaced energy is greater than the energy when only one drive is blocked. For example, punishment sets up an avoidance-of-pain response conflicting with the already operating approach-to-goal response. The drive shifts by generalization to a similar object for gratification. Thus it may happen that the child who is punished harshly by his father for dependence becomes no longer dependent to his father but to persons farther out on the same dimension, such as his teacher or an older cousin, only more so, because of the two conflicting drive energies. Psychoanalysis adds to this learning formula the postulate that the cause for deviant behavior lies in the past of the individual generally in early childhood. A search for this initiating circumstance may, by isolating and analyzing its relations, reduce its disruptive potential.

The contribution of personality theory is to emphasize the dynamic complexity and integration of the individual, and the inadequacy of simple explanations. To quote Stacey and DeMartino:

Satisfaction of any drive through the principle of reward is held to bring about an equal degree of learning. If this is so, how can we ac-

count for the fact that praise is found almost uniformly to be the leading incentive. We must admit that the ego-drive takes precedence over all other drives (24, p. 151).

The application of this orientation to the subject of nurturance and independence training is manifold. The child starts to develop dependency actions and to form an acquired dependency drive soon after birth. Oral feeding frustrations are more positively correlated with later dependency than are frustrations in toilet training or sexual behavior. Lack of early frustration tends to *decrease* dependency behavior because punishment does not operate to increase it. The child who is ignored, however, becomes increasingly dependent and may try to get negative attention by whining, quarrelling, annoying others. The more he is punished, the more dependent he becomes except that the object of his drive may generalize to someone else. Very severe punitiveness has a paralyzing shock effect as though it were a hurt to the total organism.

F. COMPARISON OF ADULT PERSONALITY STRUCTURES

The areas of anxiety and strength in childhood are the same in maturity. In Jung's beautiful words spoken to an audience at Clark University in 1909:

The concealed discord between the parents, the secret worry, the repressed hidden emotion all produce in the individual a certain affective state with its objective signs which slowly but surely, though unconsciously, works its way into the child's mind, producing therein the same conditions and hence same reactions to external stimuli. At the age of puberty when the child begins to free itself from the spell of the family, it enters into life with a surface of fracture entirely in keeping with that of the mother and father (13, pp. 246-247).

1. *Puerto Rican*

a. *Areas of Anxiety for child and adult.*

(1). *Male dominance.* The male child and man worries whether his masculinity is adequate to the cultural standard, and makes excessive public demonstrations of its strength. Independence training is bound up with this. As fathers, they must maintain an authority and remoteness in keeping with this masculinity and position of dominance in the family. Where this is threatened by the wife's outside income, insecurity and hostility results. Male dominance in the family seldom leads to excessive punishment of children, although, of course, many families have sons who find their fathers castrating. The fact that in general father-figures are authoritarian but not

castrating explains the Puerto Rican tendency to accept political leaders and government appointees without questioning whether they are beneficial to the community. One difficulty in developing democratic attitudes is that these people are uncritical about their representatives (23).

(2). *Female martyrdom*. From an early age the excessive dependence of the female is inculcated along with a martyrdom complex. The little girl is confined to the home, to the care of other children in the household, and tight chaperonage if she goes out. This frustration leads to fantasies of freedom, and in adolescence to ideas of romantic love and elopement. The ideal that she (like her mother) be good and understandingly kind forces a rôle on her which is maternal. Brothers and, later, sons come to idolize their sisters and mothers. Her sexual frustration—due to male dominance, the double standard, and her desexualization by mother-worship—produce a tendency toward outlet through holding sons close. This emotional and often financial dependency formed by mothers is one reason why the men have difficulty in making marital attachments of any depth. The incoming American standards of male-female equality at jobs and in the home is changing this situation so that women are not as subservient, and therefore not as frustrated. The former envy of male status and prerogatives is giving place to a feeling of power in women. An experiment on family values conducted with 521 middle-class university freshmen at the University of Puerto Rico showed that a large number expressed fear of the mother indicating a confusion about power, prestige, and authority values. Strong competitive strivings among females is producing confused and resentful attitudes among both men and women (1, p. 50).

(3). *Weight of compulsory social web*. The constant round of obligations and interventions of relatives, ritual kin, and friends could be an area of difficulty. The individual has relatively no privacy for 'personal' development—families are extended, often crowded, and the individual from babyhood to adulthood has all his behavior socially diffused. Multiple-figures are easily formed. Emotional attachments cannot be deep, even between man and wife, in the everlasting presence of others. All behavior becomes socialized—from sex to the smallest decision. This must have a levelling effect, tending to drag all deviants close to the norm and thereby stifle any initiative. The lack of ego-involvement where all the edges of frustration are socially dulled is a factor contributing to listlessness and mildness in every personality dimension.

b. Areas of strength for child and adult.

(1). *Contiguity of affection and encouragement, absence of brutal punishment.* The gradual transition from initial dependence of the baby to independence through graduated chores and increased responsibility for others, and the unforced yet ready acceptance of adolescents as free individuals of capacidad cannot be underestimated as strengthening to the Puerto Rican ego structure. Early independence and tolerant socialization contribute to mental health making people spontaneous in interrelationships, confident, free, gay, and unsuspecting.

(2). *Social absorption of aggression and mandatory 'respeto.'* The responsibility taken by the people around both child and adult to either ignore or stop aggression, and bring about open and respectful consideration of each other's rights is a powerful force for peaceable adjustment of difficulties. It leaves each party with some face-saving dignity, and prevents bottled-up resentments because the issue gets aired and judged by a well-meaning jury. The average Puerto Rican is not a fighter, not quarrelsome, and petty injuries which expressed while drunk are supposed not to be the responsibility of the individual but of his friends to smooth over.

(3). *Fatalism and passivity.* The acceptance of God's will has a neutralizing force on the bitterness of adversity. Nothing can be done about it. Acculturation to American ideas of cause-and-effect as being due to the individual brings a stirring though unhappy change in this attitude. Mothers see their children as the result of good or bad child-care routines, adolescents see their schooling or recreational opportunities as expanded or curtailed by their communities, political machines, men see their incomes as reflecting their outlay of energy and enterprise.

2. Jamaican

a. Areas of anxiety for child and adult.

The three areas which are sources of strength to the Puerto Rican are exactly the opposite for the Jamaican.

(1). *Absence of continuity of affection and encouragement, presence of brutal punishment.* Although nurturances and mother-love are given, they are given inconsistently and unwarmly. The child has no encouragement to ego-building, everything being criticized or punished because the mother is operating with the thought that she 'makes' the child, that it is evil by nature, there is no good in it, it must be bent, and this is *her* responsibility. The punishment increases dependency, forming a stronger drive in this direction than the Puerto Rican has from reinforcement of

demands for dependency-satisfaction. When the punishment is really brutal, shock may warp the child, making him emotionally sterile or abnormally aggressive. The fear which Jamaican children feel for their fathers and the resentment they feel because of the unstable relation of their fathers to them and their support, produces in the adult Jamaican a suspicious, hostile attitude toward all figures in authority. This is mixed with a dependency on government, a need for being governed, which stems from the unsatisfied dependency of childhood.

(2). *Constant aggression and accusation.* The Jamaican child shows intense sibling rivalry, resentment over treatment, inequalities of food, toys, etc. There is undercover fighting at home, in the schools, and after school. At home fathers and mothers quarrel, and with friends there is much bickering, practical jokes, charging one another with lying or stealing, taking offense, etc. Since overt aggression is taboo in the English culture also, this is the way the Jamaican expresses it.

(3). *Competition, intrapunitiveness, and extrapunitiveness.* The accumulation of this world's goods, through hard work, saving, and buying property is the primary value to the Jamaican. Once gotten, it must not be lavishly displayed nor lavishly spent; rather, one must be decently humble or even hide evidence of gain. The propriety of all matters is to *be* competitive and masked under controlled behavior which will not cause envy or rancor. Where property cannot be accumulated, as within the plantation system, the insecurity of men is almost unsupportable, and shows in their rejection attitudes. Children are pushed aside constantly for more gain—food is begrudged because it costs, adolescents cannot get a start with agriculture or husbandry because they might waste while learning to do, girls dream of clothes and a better house when they marry because they are begrudged niceties which cost money. The Jamaican tries to turn his intrapunitive self-blame for lack of success in gathering wealth toward extrapunitiveness found in blaming others, employing an obeah man, going to seances, and indulging in violent religious meetings.

b. Areas of strength for child and adult.

(1). *Sex.* Unlike the Puerto Rican, the Jamaican has no worries about sex. Both men and women are equally free and satisfied, although of course subject to the individual idiosyncrasies and experiences which are not culturally determined.

(2). *Equality of the sexes.* This balance of power in the home is better for the woman, less ego-satisfying to the man who sees his wife and

children as not entirely dependent upon him. In stable homes, the children enjoy equal affection and dependency to both parents whereas in unstable homes the mother becomes an inconsistent figure who is both loved and feared because she has to assume the total responsible rôle. As the children grow up, equality means much less dependency for the girl, much earlier socialization for the boy. Equal education makes for equal jobs where they are available. Equal rights under the English legal system is another factor in woman's independence.

(3). *'Personalized' freedom, social independence.* The adult Jamaican has privacy and independence for his projects but he drags from childhood a stronger dependency attitude. The conflict between his desire "to make good (s)" and his dependent tendencies make him a desirable worker in a job of small scope which is supervised.

The social independence he has as a result of living in a nuclear family with firm boundaries between it and outsiders gives him more autonomy in activity and a deeper emotional involvement in the few people he cares for. Children are tied to their parents, and find it a difficult wrench to be suddenly cast loose in late adolescence and expected to be independent, self-supporting, self-reliant, and successful.

G. PERSONALITY STRUCTURE OF MIGRANTS

1. *Puerto Ricans in New York*

The Puerto Ricans in New York show the Spanish culture patterns of the lower classes on the island confounded by conflict with an industrial Protestant culture. Christopher Rand finds that on the whole they are a carefree people being mechanized fast and adapting well.

Some come individually, looking on the New York experience as an adventure. Many make a cycle of seasonal work, for example, working on the sugar crop in Puerto Rico, coming here for the grain, fruit, or truck garden crops or perhaps taking a city job for a while and then returning to the island to live on the cash until the next sugar harvest. This shows the itinerant mobility noted among plantation workers by Sidney Mintz and Mrs. Wolf. The city workers go into the trades: garment industry, hotel and restaurant work, laundries, and machine shops. Union membership is easy for them because they understood it in Puerto Rico where they belonged to unions. However, other organizational groups are not joined, the preference being for informal groupings. They do not produce political leaders and in general fight shy of all government and welfare agencies, the reason being the distrust of upper-class controls in Puerto Rico.

Mostly, they come in large families which show the group solidarity features of lower class life in Puerto Rico. Confined to overcrowded, disagreeable, unrepaired housing, the family is a residence unit rather than a blood unit because it is extended to friends and children of others. Outside of the family, social activity goes with friends and relations in the locality, next to friends in the same building. Then it spills out into the street and beyond this is lost. Away from their neighborhood they feel lost and confused.

The consideration of what this means for nurturance and independence training of children shows a change of values. In Puerto Rico, lower-class women should not work outside the home, but here many have to and can get jobs. This means that for the first time they are unsupervised and some find the new freedom heady; there are charges of loose morality. In general, however, housewives who work also have large broods of children so that more and more the fathers have to help with the housework. This is a source of conflict between the parents due to rôle insecurity for the man and rôle equality for the women. It also divides the alignment of the children, both for love and for control, producing a less affectionate and less clear relationship. The father still *tends* to be the dominant authority and there is consistent kindness, patience, and lack of overly strong punishment. The children do not get as much attention as they did in a more relaxed culture and this may lead to feelings of rejection and self-centeredness, of being lost and uncared for.

Like their mothers, girls also are increasingly free, due to acculturation although boys have the usual permissive freedom to roam. This they do in gangs, toughness and solidarity being shown in dress (sideburns and jackets with group emblems) and in swashbuckling, cowboy-hero type behavior emphasizing bravado masculinity.

As these children widen out in a city life and reflect the shifting values at home they become conscious of their parents' problems: pessimism and hopelessness in the midst of a culture which expects a wilful feeling of carving a future whereas the old culture restricted any upward mobility from individual hard work which would draw him away from his social web. There is dejection over the color consciousness of the Whites and Negroes, the language barrier, the inability to understand the necessities of punctuality, rush, and efficiency. This produces a trend toward disliking other minorities and cleaving to all Spanish-speaking people and ways as a rebellious reaction to the pressure of Americanization. Basically, the lessening of social ties, the increase in individual autonomy is the crux of the difficulties.

2. *Jamaicans in London*

These people have some of the same problems as Puerto Ricans: the hunt for work (although both groups are considered good workers and are desired as employees), the adaptation from tropical living and food to a cold climate, the emphasized color segregation. Beyond this, however, the Jamaicans (as reported by Senior and Manly) exhibit different adaptations. They are ambitious for better and better jobs, resentful when they fall back in preference for whites. They fight for their rights: there were London race riots in 1949 and 1957, primarily aggravated by inequality over jobs, wages, and housing. Another area of conflict was their self-conscious desire to infiltrate into white organizations. They came with the same social habits as the English and expected to join in sports, pubs, clubs, civic enterprises only to find the color snobbery reduced their orbits. They do not tend to stay by themselves, rather "they feel entitled to participate in the general life of the community" (21, p. 25).

Nothing is said in the sources found about nurturance and independence training for children but the inferences are clear: small families or individuals, economically and socially oriented outward and upward, rebellious at set-backs, unhappy over inequalities. The same must be true of the children. The wrench of migration must, however, be less traumatic than for the Puerto Rican child, because it is more of the same value system except that it is often unrealizable.

H. CONCLUSIONS

This paper has found that, where economies were matched, the differences in child-raising patterns have been the product of different values in the Spanish and the English cultural tradition. These differences make for profound differences in nurturance and independence training which in turn form the adult personality. When these people migrate, the areas of conflict and strength remain the same. The most interesting development of this study is the contrasting balance in areas of strength and conflict between Puerto Ricans and Jamaicans. Puerto Ricans are strong in their continuities of encouragement, their extensive social relationships, the ideals of fatalism and acceptance. The Jamaicans are weak in home security, high in frustration-aggression, high in extra and intrapunitive behavior, and high in a compulsion toward the necessities of competition.

The Puerto Ricans are weakened by worry over male dominance, female martyrdom, and the levelling weight of the social web. Jamaicans are strong in sexual adjustments, female equalities, and freedom from people for individual enterprise.

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INDEPENDENCE TRAINING AND SOCIAL CLASS IN JAVA, INDONESIA*

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A. INTRODUCTION

Recent studies of the development of achievement motivation have indicated the existence of two ideal types of family distinguished primarily in terms of their degree of emphasis on the independence training of the children. Thus, McClelland (5) differentiates between "cultures and families where there is an emphasis on the independent development of the individual" and those "in which the child is more dependent on his parents . . . as a subordinate part of a larger solidary family unit." Emphasis on independence training varies, for example, among religious and ethnic groups and according to the education of the parents (6).

While many observers seem to feel that independence training is particularly marked in American families (7), the second type of "solidary" family with its minimizing of individual initiative and independence appears to flourish particularly in societies based on the high degree of social co-operation necessitated by a well functioning irrigated agriculture. Goldfrank (3) and others have remarked on this for Pueblo society, and traditional Javanese society probably conforms even more closely to this pattern. Its system of terraced wet rice cultivation depends on the effective organization of close co-operation among villagers and the denial of purely individual interests. The traditional outlook places a high value on such characteristics as co-operativeness, helpfulness, self-effacement, de-emphasis of individual peculiarities, behavioral predictability and mutual interdependence.

It is "a set of values which commit those who hold them to a communalistic rather than an individualistic approach to economic problems" (2). It is likely that these values would find their reflection in traditional child rearing practices which would tend to de-emphasize the child's individuality and hence would not be marked by strong independence training. The

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references to child training practices collected by van der Kroef (8) seem to be in accord with this supposition.

The impact of Western patterns with their individualizing tendency has however been considerable. It has manifested itself through economic influences, through the modern school system, and in many other ways (9). The question now arises as to the possible impact which these influences may have had on norms of child training in the Javanese family. This is of significance in gauging the depth of personality change which may have been brought about by these influences. The individual who is exposed to individualistic norms from the cradle is likely to be more deeply affected by them than one who meets such norms for the first time as an adult.

In this connection one might expect the class differentiations in modern Javanese society to make themselves felt, for the different social classes are very unequally exposed to western and generally individualizing influences. On the whole, the impact of these influences will vary with the occupation and the educational level of the person concerned. The University graduate practising one of the independent professions and reading foreign magazines is much further removed from the traditional way of life than the artisan following a traditional craft.

The present investigation attempts to establish whether the differential social experience of certain social classes in Javanese society is reflected in differences in regard to the crucial child training variable of independence training. If so, it would follow that the depth to which the personality of a given member of this society is affected by individualistic norms would depend in part on his social class position. This is a matter of some significance in assessing the likely results of social policy decisions.

While a great deal of attention has been paid to the relationship of early training to adult personality characteristics, there is less interest in the influence of parental experience on child training patterns. Kardiner even writes: "The origin of the disciplines to which the child is subjected is largely a field for speculation in which we have little interest" (4, p. 472). On the other hand, the authors of *The Authoritarian Personality* consider that "each family in trying to rear its children proceeds according to the ways of the social, ethnic and religious groups in which it has membership" (1, p. 6). If this is accepted, it seems necessary to establish precisely what aspects of those experiences which serve to differentiate social groups may have an influence on child rearing norms and practices.

B. PROCEDURE

1. Subjects

The subjects of this investigation were 60 Javanese mothers all resident in a fairly large Central Javanese town, 20 mothers being interviewed from each of three distinct social groups.

Group I consisted of mothers whose husbands were manual workers, artisans, messengers, etc. They belonged to the lowest paid group.

Group II consisted of mothers whose husbands were office workers and teachers (non-graduate). The majority of them (16) were in state employment.

Group III consisted of mothers whose husbands were professionals of graduate status, that is to say, lawyers, doctors, engineers, University lecturers, etc.

2. The Interview

The interview schedule was divided into three parts:

(a) *Background information.* This included questions about the type of house lived in, number of rooms, number of children, religion, father's occupation, place of origin, level of schooling, as well as questions about the types of magazines and newspapers, if any, read by the mother and also the parts read.

(b) *Information about independence training.* This part of the interview consisted of a series of 21 questions, all having more or less the general form: "At what age do you think a child should do X by himself, where X was an activity, such as, "drinking from a cup," "washing," "dressing," "walking," "eating," "go to the toilet," "sleeping out," etc. A full list of these activities is given in Table 1. One question referred to the age of weaning, another to the age at which the child would stop being carried about and rocked, and the final question referred to the best age for marriage, separately for men and women.

(c) This part of the interview was concerned with other parental demands and will be reported in a separate publication.

The mothers of Group II were interviewed during their attendance at a Health Clinic and were chosen at random from among those available on a given day. The mothers in Group III did not attend the Clinic and had to be interviewed in their homes. No attempt at sampling was made. Among the Group I mothers 12 were interviewed while attending the Clinic and 8 in their homes. The interviews were conducted in Javanese by two married women graduates.

C. RESULTS

1. *Independence Training*

For each activity the mean age at which independent performance was thought to be desirable by the mothers was calculated. Separate means were obtained for each of the social groups so that it becomes possible to compare their relative emphasis on independence training. One would expect that greater emphasis on independence training would be associated with a tendency to lower the estimate of the age at which a child is expected to perform any given activity by himself, also to lower the age of weaning, of no longer being carried about, etc. Table 1 shows these tendencies quite clearly.

TABLE 1
MEAN AGES AT WHICH CHILDREN ARE EXPECTED TO PERFORM VARIOUS ACTIVITIES
BY THEMSELVES ($N = 20$ FOR EACH SOCIAL GROUP)

Activity	Social class		
	I	II	III
1. Age of weaning	1;6	0;11	0;10
2. Drinking from cup	1;8	1;3	1;0
3. Eating	2;3	2;1	2;1
4. Walking	1;5	1;2	1;1
5. Stop being carried about	3;5	2;5	1;6
6. Dressing	4;9	4;8	3;6
7. Washing	5;6	5;0	4;10
8. Playing with friends	3;7	3;1	3;4
9. Going to neighbours	4;7	4;6	4;5
10. Sleeping out	6;7	6;5	5;3
11. Arranging belongings	10;4	8;7	5;10
12. Helping parents	8;8	6;1	5;8
13. Going to school alone	8;5	6;6	7;8
14. Using school money	9;1	9;10	9;1
15. Understanding responsibility	9;4	9;6	8;6
16. Spending money	6;9	5;9	6;0
17. Buying things at a shop	11;5	13;2	11;1
18. Going for holidays out of town	13;9	12;9	11;0
19. Joining youth groups	10;8	11;7	10;5
Females	16;10	20;3	21;0
20. Age of marriage			
Males	22;10	25;9	26;8

Applying the Sign Test to the comparison of the three social groups with each other on Items 1-19 we get the following P values:

Difference Group I and Group II, $P = .01$.

Difference Group II and Group III, $P = .002$.

Difference Group I and Group III, $P < .001$.

The Null Hypothesis, that there are no differences in emphasis on independence training between these three social groups, may therefore be confidently rejected.

It appears that emphasis on independence training is greatest in the professional group which tends to have the lowest mean age expectations in regard to independent performance by its children. On the other hand, emphasis on independence training would seem to be least marked in the group of wives of manual workers who tended to have the highest mean age expectations in regard to independent performance. The clerical group appears to occupy an intermediate position in regard to the variable under discussion.

In regard to the last activity, getting married, the trend is clearly reversed. Group I sets the lowest ages for this and Group III the highest; this applies whether the comparison concerns males or females. Apart from economic factors which undoubtedly play a part here this difference may be an expression of differing attitudes to the relationship of the individual to the social group, e.g., the family. In the one case the individual is not considered as a separate social unit capable of existing outside a well-defined family rôle. Once he is too old to fulfill the dependent rôle of a child he must immediately assume the rôle of parent. On the other hand, where the individual as such is considered to have an existence outside his family rôles there may be a fairly long period in his life in which he has no strongly defined family rôle, i.e., as a young adult who is not yet married.

If the activities used as an index of independence training are divided into two groups, those (Nos. 1-10) applicable to pre-school children, and those (Nos. 11-19) applicable to school age children, it is found that the inter-class differences are much more marked for the pre-school group. All the inter-class differences are significant for this group, whereas for school age activities only one difference, that between Class I and Class III, is significant ($P = .004$).

Among the 10 pre-school age activities, six (Nos. 1, 2, 4, 5, 6, 7) show interclass differences significant at the 5 per cent level when the Wilcoxon U -test is applied separately to each, whereas only one (No. 12) of the school age activities involves differences that reach statistical significance.

As regards the validity of these results, they certainly could not be accepted as giving an accurate picture of the actual child training methods practised by these mothers. To establish such a concordance direct observational studies would be necessary. The results obtained can however be regarded as a direct expression of the different normative influences regarding child training methods at work in the three groups of mothers. The differences in the replies indicate that the norms of child training cannot be the same for the three groups. To what extent these normative differences are reflected in the actual behaviour of the mothers towards their children would be a subject for further investigation.

2. *Differential Experience*

The varying emphasis on independence training in the three social groups may be related to differences in their social experience. Some of these differences emerged in the interview data (Table 2).

TABLE 2
RURAL-URBAN ORIGIN OF MOTHERS

Mother's origin	Social class		
	I	II	III
Urban	10	16	18
Rural	10	4	2

$$\chi^2 = 6.71$$

$$P < .02$$

There is a tendency for a higher proportion of mothers of rural origin to be found in Class I, a fact which might make one expect a greater influence of traditional norms in that group.

The educational level of the mothers reflects a similar difference (Table 3).

TABLE 3
EDUCATIONAL LEVEL OF MOTHERS

Educational level	Social class		
	I	II	III
No Schooling	14	2	—
Primary School	6	9	3
Junior High School	—	7	7
Senior High School and College	—	2	10

The educational system, being essentially organized along western lines, can probably be regarded as one of the most potent solvents of traditional norms and a powerful individualizing influence (9), particularly at the higher levels. It is not surprising to find the intensity of its influence directly related to social class.

But educational influences do not stop with the schooling of the mothers; they are continued into adult life by the mass media. Differential exposure to such mass media as may have a more or less direct influence on norms of child training may be a relevant factor in terms of the present analysis. In this connection the magazine-reading habits of the mothers may be significant. For those mothers who have the ability, the money, and the wish to read magazines at all there are broadly three types available. The first type is printed in Javanese, the local vernacular language, the second in Indonesian, the national language, and the third group comprises foreign magazines, previously Dutch, now mostly American. It is reasonable to assume that in

regard to content, and in particular implicit normative content, these three types represent a gradation from those closest to traditional patterns to those furthest removed from such patterns (Table 4).

TABLE 4
NUMBER OF MOTHERS READING VARIOUS TYPES OF MAGAZINE

Types of magazine	Social class		
	I	II	III
None	20	9	—
Javanese Language	—	7	2
Indonesian Language	—	9	18
Foreign Language	—	1	9

The column totals in this table may be greater than the number of subjects in the sample because any subject may read more than one type of magazine. None of the subjects in Class I read any magazines, being therefore protected from any disturbance of traditional patterns through mass media of this type. The difference between Class II and Class III mothers as regards relative preference for different types of magazine indicates the likelihood of less traditional influences in the latter group. In this connection it is also interesting to note that while none of the Class I mothers read a newspaper, all but one of the Class III mothers do so.

It is not intended here to give an exhaustive account of all aspects of the differential life experience of the various social classes. Among many others one might mention the influence of living conditions and of the father's occupation on child training norms. There is evidence that the living conditions of Class III allow greater privacy than those of Class I, with Class II being in an intermediate position, as usual. The houses occupied by Class III all have brick walls, whereas almost all those of Class I and the majority of Class II houses utilize thinner materials. Also, the average number of persons per room rises from 1.7 in Class III to 2.8 in Class I; moreover, the definition of "room" in the latter case is rather loose. It is likely that the early establishment of independence training may be hampered by lack of privacy.

As regards the occupation of the fathers in the families investigated it is of some significance that the fathers in Class I tended, on the whole, to be found in traditional occupations, whereas those in the other groups tended to follow occupations which require a rational rather than a traditionalistic orientation. The contrast of work ethic between the traditional artisan of Group I and the "independent professional" of Group III is pronounced. Whereas the conditions of work of the former would tend to put independence at a discount, exactly the reverse is true for the latter.

3. *Achievement Motivation*

McClelland (5) has advanced evidence to indicate that early and intensive independence training may be related to high achievement motivation in both mothers and children. If this relationship holds for our sample of mothers we might expect to find some evidence of higher achievement motivation in Class III which places the greatest emphasis on independence training. While direct measures of achievement motivation were not part of the present study, some relevant indirect evidence was obtained from data on the mothers' social mobility. It seems safe to assume some kind of positive relationship between upward social mobility and achievement motivation, and if this is so, one might expect to find evidence of greater upward mobility among the Class III mothers. This evidence is presented in Table 5 in

TABLE 5
RELATIONSHIP BETWEEN CLASS POSITION OF HUSBANDS AND OF FATHERS
OF INTERVIEWED WOMEN

Father's social class	Husband's social class		
	I	II	III
I	18	2	*
II	2	18	13
III	—	—	6

* One woman in Class III refused to give any information about her father's occupation.

which the class position of husbands and of fathers is compared. Where the father's occupation was that of peasant he was included in Class I.

It appears from these data that whereas social mobility is almost absent in Class I and Class II, about two-thirds of the Class III women were not born into this class. It is not unlikely that relative differences in achievement motivation have played some rôle, for example, in selecting which daughters of Class II fathers would be likely to marry Class III husbands and which not.

D. CONCLUSIONS

There appear to be marked differences in emphasis on independence training between Class I and Class III mothers in our sample, while Class II mothers occupy an intermediate position in this respect. On the whole, independence training is considered to be advisable at an earlier age by mothers in the professional group, while those in the working class group tend to set the highest ages for independent achievement.

These differences appear to be more marked where the treatment of pre-school children is concerned, presumably indicating a direct influence of the school on the behavior of lower class parents. These parents wish their

children to have the advantage of schooling, but once the child moves into the orbit of that institution they have to adjust their norms of behavior towards him to his new status and are forced to treat him as more of an independent individual than if his social life had been entirely lived out in the family. Thus, the extension of educational facilities in underdeveloped areas is likely to have much wider social psychological consequences than spring directly from the formal instruction imparted.

The differences between the classes in regard to emphasis on independence training may be related to certain differences in their social experience. Among the aspects of that experience which differentiate the social groups concerned are such factors as the rural or urban origin of the mothers, their educational level, their exposure to different types of mass media, the degree of privacy permitted by their living conditions, and the type of work orientation required by the husband's occupation. In every case the upper class group can be shown to have had the greatest exposure to western and individualizing influences and the lower class the least. It is not unreasonable to assume that this differential experience is directly reflected in child training norms which in turn would have some influence on child training practice. The speed with which such influences can affect quite considerable changes in norms of child training may be relatively high, as large sections of the present professional class would not have been intensively exposed to some of these influences for a very long period of time. For example, even in 1940 there were only 29 Senior High Schools in the whole of Indonesia and in 1939 they produced only 204 Indonesian graduates.

Moreover, our data indicate that the majority of the sample of Class III mothers originated in Class II, a sign of upward social mobility which may well be compatible with the hypothesis of stronger achievement motivation in this group. In that case our data could be interpreted as providing supporting evidence for the supposed general relationship between achievement motivation and independence training.

Finally, it may be mentioned that the differential experience which children from different social classes have with regard to early independence training may well be reflected in certain personality differences. If the relationship established by McClelland holds, the desire for individual success should certainly be a much more potent motive among Class III than among Class I individuals. Appeals to this motive are thus likely to produce a disappointing result among the latter group which together with the even more traditionalistic peasantry forms the great majority of the population. It is thus possible that social progress would have to be based upon an appeal to other sources of motivation.

E. SUMMARY

A sample of 60 Javanese mothers, in which workers, white collar, and professional groups were equally represented, were asked to give the age at which they would expect their children to be able to perform various activities by themselves. There was a statistically significant tendency for the independence ages given by the professional group to be lower than those given by the working class group, while the white collar group occupied an intermediate position. These differences appeared to be more marked for activities of pre-school age children than for older children.

It was shown that the social class groups represented in the sample differed in respect to rural or urban origin, educational level, exposure to certain types of mass media, and degree of privacy permitted by living conditions. It was suggested that these might be some of the factors responsible for the differences in regard to independence training.

There was some evidence of greater upward social mobility among mothers of the professional group, and this would tend to confirm previous observations on the connection between emphasis on independence training and high achievement motivation.

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PARENTAL DEMANDS AND SOCIAL CLASS IN JAVA, INDONESIA*

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A. INTRODUCTION

In a previous publication (1) it was shown that there was significantly more emphasis on independence training, especially for pre-school children, among a sample of Javanese mothers from the professional group than among a sample of working-class Javanese mothers. Mothers from the lower white collar group occupied an intermediate position in this respect. These differences were related to the educational level of mothers, their exposure to various types of mass media, living conditions, and other factors.

The question may be raised as to whether these differences in respect to independence training are not in fact merely one aspect of a fundamental difference in the relationship between parents and children. Emphasis on independence training may be regarded as a parental demand—a demand which the parents make of the child, and one which they are prepared to enforce, if necessary. At a certain stage the child is required to perform all kinds of activities by himself and without parental aid. The earlier the child is required to do this, the heavier would seem to be the parental demands.

It is of course true that these parental demands are subsequently internalized by the child so that the child itself comes to value independence, but just how unstable this process is at first may be seen from the numerous examples of "regressive behavior" which even quite normal children in Western societies may at times exhibit. Regressive behavior in this sense simply indicates the failure to internalize parental demands for independence.

It is now possible to advance the general hypothesis that emphasis on independence training is but one aspect of a general severity of parental demands. This severity of parental demands is a pattern of behavior standing at the opposite pole to parental indulgence. In this latter pattern it is the demands of the child that dominate the child-parent relationship, not those of the parent.

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¹ With the practical assistance of Siti Rahaju Haditono.

It is perhaps necessary to stress that this dichotomy has no necessary connection with authoritarianism or with the syndrome of "overprotection." There are other and more effective ways of imposing parental demands than old fashioned authoritarianism, and the overprotective mother is often the most demanding of mothers, the difference being in the content of the demands.

Some confirmation of the general relationship between independence training and general severity of parental demands may be obtained from the data published by McClelland. On the one hand, high n Achievement is related to severity of independence training. On the other hand, it appears that "perceived severity of upbringing or 'felt lack of love' is associated among college students with high n Achievement" (6, p. 279).

If this relationship holds, we could distinguish two types of parent-child relationship in this connection. On the one hand, there is the indulgent relationship marked by a very close and immediate emotional tie between parent and child and hence the parent's voluntary submission to the demands of the child. On the other hand, there is the severe relationship marked by suppression of immediate emotional response, increased psychological distance and parental enforcement of social demands for independence and discipline. The former type of relationship would seem to produce a lower level of achievement motivation than the latter.

The area, other than independence training, in which parental demands make themselves felt with particular force in normal "Western" type families is that of discipline. By this is meant the demand that the child's natural activity be subjected as early as possible to objective, i.e., external and generally valid, schedules and rules. At first this concerns such biological functions as eating, sleeping, and excretion. Later on, it extends to the child's entire activity, subordinating it to the work principle. The child must help with house tasks, work at school, etc.

The work of Davis and Havighurst(2) and Ericson (3) has demonstrated that severity of parental demands is related to social class. According to their findings: "Middle-class mothers, in general, expected their children to assume responsibility earlier in the home . . . Middle-class parents place their children under a stricter regimen, with more frustration of their impulses, than do lower-class parents . . . In the middle-class families there is more emphasis on the early achievement of learnings in the crucial areas . . . Middle-class life is in general more demanding with reference to all learning areas."

It would be of interest to test these generalizations in the very different

society of Indonesia. The traditional child rearing patterns in most Indonesian communities have frequently evoked comments from Western observers because of their extremely indulgent nature. Summarizing these observations, van der Kroef (7, p. 95) states: "Perhaps the most outstanding characteristic of this childhood is its extreme permissiveness. Most authorities seem agreed on the utter lack of formal discipline in the Indonesian's early life." It has been shown previously (1) that Social Class position in a sample of urban mothers was closely related to various indices of exposure to Western influence, such as level of formal education, types of mass media used, etc. In general, the extent of Western influence can be said to vary with family income.

The question now arises as to whether these differences in the degree to which the traditional patterns have been overlaid by middle-class Western influences are reflected in child rearing norms. If there is such an influence we would expect marked class differences in the severity of parental demands, the lower class mothers being much closer to the traditional permissive pattern of child rearing.

A previous report (1) has established these differences for the field of independence training. The present investigation is concerned with the disciplinary aspect of parental demands, as it manifests itself in the establishment of socially imposed routines for biological functions like eating, sleeping, and excretion, in parental insistence on the older child's taking responsibility for household tasks and in parental reactions to the child's demands. Finally, an enquiry as to the methods used for enforcing parental demands was made in order to throw light on the dynamics at work in the two types of parent-child relationship.

B. METHOD

1. *Subjects*

The subjects of this investigation were 60 Javanese mothers all resident in a fairly large Central Javanese town. Twenty mothers were interviewed from each of three distinct social groups.

Group I consisted of mothers whose husbands were manual workers, artisans, messengers, etc. They belonged to the lowest paid group.

Group II consisted of mothers whose husbands were office workers and teachers (non-graduate). The majority of them (16) were in state employment.

Group III consisted of mothers whose husbands were professionals of

graduate status, that is to say, lawyers, doctors, engineers, University lecturers, etc. Further details have been published elsewhere.

2. *The Interview*

The mothers of Group II were interviewed during their attendance at a Health Clinic and were chosen at random from among those available on a given day. The mothers in Group III did not attend the Clinic and had to be interviewed in their homes. No attempt at sampling was made. Among the Group I mothers 12 were interviewed while attending the Clinic and 8 in their homes. The interviews were conducted in Javanese by two married women graduates.

The interview schedule was divided into three parts: (a) Background information. (b) Information about independence training. This part of the investigation is published separately. (c) Questions about certain aspects of parental demands and methods of enforcing them. These questions covered the following topics: Eating schedules, Sleeping schedules, Toilet training, Household tasks, Methods of enforcing parental demands, Parental reaction to child's demands, Rewards and punishments used.

C. RESULTS

1. *Imposition of Schedules and Tasks*

The mothers were asked whether they made any attempt to arrange the sleeping times of their children according to any more or less fixed schedule. Their replies are shown in Table 1.

TABLE 1
NUMBER OF MOTHERS CONSCIOUSLY ATTEMPTING TO IMPOSE
SLEEPING SCHEDULE ON CHILDREN

	Social class		
	I	II	III
No attempt to fix sleeping times	18	9	3
Sleeping according to schedule	1	11	17

$$\chi^2 = 25.16$$

$$P < .001$$

The next question was concerned with whether the mother made any attempt at fixing meal-times for her children according to any kind of pre-conceived schedule or whether she permitted them to take food whenever they felt like it. The mothers were also asked at what age, if any, they would try to impose regular meal-times on their children. The replies are shown in Table 2.

TABLE 2
NUMBER OF MOTHERS ATTEMPTING TO IMPOSE EATING SCHEDULES

	I	Social class II	III
No schedule at any stage	15	9	1
Schedule begun during childhood	4	3	1
Schedule begun at birth	1	8	18

$\chi^2 = 29.87$ $P < .001$

The subjects were also asked at what age, if any, toilet training was begun. Due to an error, only 10 mothers in each sub-group were asked this question. The mean ages for beginning toilet training were as follows: Class I—24.8 mths; Class II—15.9 mths; Class III—17.7 mths. Applying the Mann-Whitney *U*-test, the difference between Class I and Class II just reaches significance at the 5 per cent level, while the difference between Class I and Class III just fails to reach significance.

The next question was concerned with the age at which boys and girls would be required to perform various household tasks. As the differences between the three social groups were not statistically significant in respect of their treatment of girls, only the results for boys are presented in Table 3.

TABLE 3
MEAN AGE AT WHICH BOYS ARE GIVEN VARIOUS HOUSEHOLD TASKS

	I	Social class II	III
Taking care of younger brothers	9;8	9;0	7;0
Sweeping floor	8;5	7;6	7;1
Purchasing things needed at home	9;0	7;11	8;11
Laying the table	11;2	9;10	8;9
Sweeping the yard	9;0	8;5	8;0
Washing up	10;2	9;2	9;0

Applying the sign test to these data we find the following relationships:

Difference between Class I and III, $P < .02$

Difference between Class I and II, $P < .02$

Difference between Class II and III, $P = .11$.

2. Maternal Reaction to Child's Demands

One question, in particular, touched on the mother's reaction to her child's demands. The mother was asked whether she usually conformed to the child's request to be rocked or carried about. The operative word in Javanese denotes an operation by which the child is rocked or carried about on the adult's hip. This is a very common arrangement in this society and

many small Javanese children spend a considerable part of their lives in this position. It is the commonest way of reacting to any slight sign of distress on the part of the child. The replies of the mothers are shown in Table 4.

TABLE 4
NUMBER OF MOTHERS ACCEPTING OR REJECTING CHILD'S
REQUEST FOR CLOSE PHYSICAL CONTACT

	Social class		
	I	II	III
Accepting	18	11	10
Rejecting	2	9	10

$$\chi^2 = 8.33$$

$$P < .02$$

3. *Methods of Imposing Parental Demands*

The subjects were asked how their young children went to sleep at night. There were two main alternatives—the children would either be rocked to sleep or they would go to sleep by themselves. The frequency with which mothers in different social classes mentioned these alternatives is shown in Table 5.

TABLE 5
NUMBER OF MOTHERS REPORTING CHILDREN BEING ROCKED TO SLEEP
OR GOING TO SLEEP BY THEMSELVES

	Social class		
	I	II	III
Rocked to sleep	13	9	2
Going to sleep by themselves	5	10	16

$$\chi^2 = 13.70$$

$$P < .01$$

Further questions were concerned with the use of certain types of rewards and punishments in imposing parental demands. The subjects were asked whether they ever gave their children presents, and if so, whether this was made conditional on the behavior of the child, or not. Replies to this question are shown in Table 6.

Finally, the subjects were asked what form of punishment they considered to be best for their children, should it be necessary to punish them.

TABLE 6
NUMBER OF MOTHERS GIVING PRESENTS

	Social class		
	I	II	III
No presents given	11	6	4
Presents given conditionally	5	7	3
Presents given unconditionally	4	7	13

$$\chi^2 = 10.54$$

$$P < .05$$

The replies were classified into physical punishments, such as pinching, making the child go hungry, slapping, etc., and psychological punishments, such as, refusing to speak to the child, locking him in his room, taking away privileges, etc. Really severe forms of physical punishment hardly occur in this society. The classification into physical and psychological punishments is of course a rather artificial one, for the former do not lack psychological significance and the latter often involve the restriction of physical freedom. However, it is felt that the two types of punishments do involve an important difference in that the "psychological" type addresses itself more to the child as a personality, whereas the "physical" type is concerned with more primitive functions. The results for this question are shown in Table 7.

TABLE 7
NUMBER OF MOTHERS REPORTING ON WHAT FORM OF PUNISHMENT
THEY CONSIDER BEST

Punishment	Social class		
	I	II	III
Psychological	2	10	9
Physical	13	3	4

$\chi^2 = 13.29$ $P < .01$

D. DISCUSSION

1. *Imposition of Schedules and Tasks*

Our results seem to indicate that there is a conscious attempt by Class III mothers to subject their children's eating and sleeping rhythms to a socially imposed schedule at an early age, whereas no such tendency exists in Class I. The Class II subjects occupy an intermediate position in this respect. Trends in regard to toilet training are less well marked but on the whole tend to indicate that Class I is also more indulgent in this respect. Finally, as far as boys are concerned, they are expected to assume responsibility for household tasks at an earlier age in the upper than in the lower class group. These results not only parallel those of Davis and Havighurst (2) and of Ericson (3) for the U.S., they are also in line with the hypothesis that Class III mothers, because of the much stronger Westernizing influences to which they have been exposed, have moved much further away from the traditional permissive child rearing norms than Class I mothers.

It may be suggested that what middle-class parents in North America and in Indonesia have at least partly in common is an orientation to the principle of achievement. As Marcuse (5) has pointed out, this is the special form which the reality principle tends to take in groups and societies dedicated to

the repression of impulses in the interests of productive efficiency. The imposition of more or less arbitrary schedules on the young child's biological rhythms may be merely the start of a consistent process whereby human impulses are put in the service of an objective productive machine. In the service of this principle men become dominated by economic motives and learn to subordinate all other requirements to the objective requirements of the work task.

This principle is entirely at variance with the traditional Javanese pattern of life. Work and productive activity as such are not regarded as of primary importance but as subordinate to certain social and cultural values and to more immediate sensuous enjoyments and aesthetic satisfactions. One experienced observer has expressed this as follows: "The Indonesian's economic activities are therefore much more subordinated to certain desirable standards of welfare, such as leisure, abundance of food, feasts, ownership of prestige-bringing objects, and so on" (8, p. 26).

Of course, even our Class III subjects have probably not reached that uncompromising orientation to the achievement principle which is characteristic of Western middle-class culture. But our data would seem to indicate that in so far as our sample of mothers have been affected by these Western norms, their treatment of their children is likely to bear the imprint of this influence practically from birth onwards. This does not exclude the possibility that in actual practice traditional patterns may continue to exert considerable influence.

2. *Maternal Reaction to Child's Demands*

Although only a single example of this has been reported, this is so characteristic that it will bear discussion. Traditionally, the small Javanese child spends a very large part of its time in close physical contact with another person. It is usually being carried about in a sling, straddling the hip of its mother, older sister, or other person looking after it. It gets its food and goes to sleep in this position whenever it wants to. At the slightest sign of distress it is rocked or fed, usually both. Tensions and visible affect appear to be reduced to a minimum, frustrations are hardly experienced. In McClelland's terms (6) these would seem to be just about ideal conditions for keeping the discrepancy between adaptation level and stimulation at a minimum and hence just about the worst conditions for the acquisition of achievement motivation. Indeed, it is true that traditionally the Javanese peasant values above all, a state which he calls *slamet*. One observer has aptly described this ideal as "a state in which, literally, nothing happens to one

. . . the Javanese asks not for joy, for an increase in wealth, for excellent health, but merely that nothing should happen to upset or sadden him" (4).

The fact that about half of the Class II and Class III mothers in our sample go so far as to consider it appropriate to reject the child's demands for close physical contact indicates how far they have moved from the traditional pattern, at least normatively. If their actions are in line with their interview responses they would tend to produce a far higher degree of affective arousal in their children than the Class I mothers who are closer to the traditional norms. Both the demand that the child's biological rhythms be subjected to imposed schedules and the parent's failure to satisfy some of the strongest of the child's own demands would tend to produce a considerable degree of affective arousal in the child. According to McClelland (6) this would be one of the most important conditions for the acquisition of achievement motivation. While no direct measures of achievement motivation are available for our sample, evidence of upward social mobility in many of the Class III subjects presented in a previous publication (1) can perhaps be accepted as indirect evidence of higher achievement motivation in this group.

3. *Methods of Imposing Parental Demands*

If one may generalize from the results obtained, it would appear that the Class III mothers in our sample tend to impose their demands more sharply and in such a way as to turn them into an appeal from one individual to another. They tend to make the child go to sleep by himself, whereas Class I mothers do not expect the child to be able to do this. They make no demands on him as an individual but accomplish the task by rocking him, an action presumably pleasurable for both mother and child.

Again, in evaluating the effectiveness of punishments the Class III mothers tend to treat the child as a personality separate from themselves, as the object of their educational efforts. In preferring the "psychological" type of punishment they also, incidentally, reveal a somewhat instrumental attitude to their own feelings, for they consider it advisable to switch them on and off in accordance with the desired psychological effect. On the other hand, the physical punishments of Class I mothers, being in any case both mild and rare, do not address themselves to the child as a separate personality but merely seek an immediate and temporary relief from an intolerable situation. The use of "psychological" punishments involves the deliberate disturbance of the social tie between parent and child; the emotional relationship between them is no longer spontaneous but is that of two individuals who seek to impose their demands on each other. This is precisely what the traditional

Javanese mother cannot do, for she continues to treat the child as part of herself, just as she and the child are both part of a solidary social group in which "there was traditionally no cleavage or awareness of cleavage between the individual and the collectivity" (7, p. 101).

The greater tendency among the mothers from the upper groups to give presents is of course partly a question of finance. But this is not the whole story, because there are presents which do not cost anything. The giving of presents (except those of a ritualistic or traditional character) presupposes the existence of two individuals with separate claims to ownership. In the middle-class family the child has his toys which are his property. But such a conception would have had no place in the traditional Javanese family oriented to collectivistic values. To give a present to one's child would be regarded as little less absurd than giving a present to oneself. On the other hand, the giving of presents in less traditionalistic families would tend to enhance the child's conception of himself as a separate individual with his own private possessions separate from those of everyone else. The unconditional giving of presents, more marked in Class III, would seem to represent this kind of concept in purer form than when presents are only given as a reward for some particular action on the part of the child.

E. CONCLUSIONS

An attempt has been made to distinguish two patterns of culturally determined parent-child relationships. The first pattern exists where the parent treats the child as a separate individual with rights and duties of his own; this results in a certain distance between parent and child, both physically and psychologically. From the start the parent demands that the child behave as an individual. This demand takes two forms. On the one hand, the child is early subjected to strong independence training—he is encouraged to do things for himself as soon as possible. On the other hand, he is also subjected to individual duties. Practically from the moment of birth it is demanded of him that he subject his biological rhythms to an imposed schedule, while his own demands for pleasurable satisfaction are frequently ignored. There is some evidence that this pattern leads to high achievement motivation in the child. It is likely to turn him into an efficient worker for whom economic motives have a strong appeal but who lacks a spontaneous relationship to other people.

The second pattern of parent-child relationships exists where the parent regards the child and himself as part of a larger collectivity in which they have their being.

Neither the child nor the parent have individual rights and duties apart from this collectivity. The highest value is the undisturbed harmony within the collectivity with which goes inner tranquility. The Javanese call this highest value *tata tentrem* (peace and order in harmony) and traditionally every person is charged with its maintenance. Thus, the traditional Javanese mother seeks above all to maintain the harmonious relationship between herself and the child, seeks to preserve her own and the child's tranquility, for were it disturbed, the harmony of the collectivity as a whole would also suffer. Thus, she makes no demands on the child and seeks to satisfy its every whim. As the child grows up it becomes very sensitive to any disturbance of group harmony and adjusts its own behavior accordingly.

It appears that Javanese mothers in the professional group, i.e., those most exposed to Western influences have been considerably affected by the norms typical for the first type of parent-child relationship. They are more individualistic and demanding in their approach to their children, while mothers from a lower class urban group still appeared to be fairly close to the traditional pattern. It is thus not unlikely that the course of socialization and the resulting motivational patterns in Indonesian children will differ according to their class of origin. For the majority who do not belong to the privileged White Collar stratum it is likely that collectivistic aspirations will have greater force than any appeal to individual self-interest.

F. SUMMARY

A sample of 60 Javanese mothers drawn from professional, white collar, and working class groups were interviewed regarding child-rearing practices. It appeared that the mothers in the professional group tended to impose eating and sleeping schedules at an early age, while the working class mothers did not. Moreover, the former group imposed household tasks on boys at a younger age and was more prepared not to accede to the child's own demands than the latter group. Differences in regard to toilet training were not so marked.

The mothers in the professional group tended to show a preference for "psychological" rather than physical punishments, to be more inclined to give presents unconditionally and to rely on the child to carry out their demands, e.g., that he goes to sleep by himself. In all these cases the preferences of the working class mothers were the reverse of those of the mothers in the professional group.

On all the aspects of child-rearing practices investigated the mothers from

the white collar group occupied an intermediate position between the other two groups.

The results were interpreted in terms of two ideal-typical patterns of parent-child relationship. One pattern which derives from Western middle-class culture treats the child as a separate individual with rights and duties of his own. The other pattern which corresponds to traditional Javanese norms treats the child and the mother as part of a collectivity and regards the harmony within that collectivity as paramount.

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PERSONALITY TRAITS OF WESTERN AUSTRALIAN UNIVERSITY FRESHMEN*

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The University of Western Australia enrolls students for professional courses in Humanities and Social Sciences, Pure Science, Medicine, Dentistry, Law, and Agriculture. The total student population in 1959 was 3165 students.

A. PROBLEM AND PROCEDURE

Tests were administered as part of the 1958 Orientation Week programme for freshmen students, and among them was Form A of the Sixteen Personality Factor Questionnaire. The scores obtained on this test were analysed, and this paper presents the scores obtained by 290 male and 138 female freshmen and compares them with the scores given for American College Students in the 16 PF Tabular Supplement (2).

The mean age given for American college students is 21 years both for males and females, while the mean ages for Western Australian students are 18.1 for males and 17.9 for females. This point should be borne in mind as some of the factors described in the test are "age loaded." The mean intelligence of the total Western Australian freshman group is 126 with a standard deviation of 7, as measured on the Australian Council for Educational Research B40 Test of Adult Intelligence.

Two main points are considered: Firstly, how Western Australian university students compare with American students on the factors listed; secondly, whether the sex differences indicated in the American group also exist in the Western Australian group. From a sociological viewpoint one might inquire as to the cultural similarities or dissimilarities as indicated by the test measures. It is possible to consider the American and Australian culture patterns as sufficiently different to produce somewhat different scores in both cases. On the other hand, one might hypothesise that even though there are cultural differences, the male and female differences might tend to remain unless there is any major cultural variation in sex rôle.

Table 1 provides a brief summary of the 16 factors of the Questionnaire.

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TABLE 1

	High score	Low score
A	Warm, sociable.	Aloof, stiff.
B	General intelligence.	Mental defect.
C	Ego strength—mature	Dissatisfied emotionality—immature.
E	Dominance.	Submission.
F	Surgency.	Desurgency.
G	Super-ego strength—persistent.	Lack of rigid internal standards.
H	Parmia—adventurous.	Threctia—shy, timid.
I	Premia—sensitive, effeminate.	Harria—tough, realistic.
L	Protension—suspecting, jealous.	Relaxed security, accepting.
M	Autia—bohemian.	Praxernia—practical.
N	Shrewdness.	Naivete.
O	Guilt prone.	Confident adequacy.
Q1	Radicalism.	Conservatism.
Q2	Self sufficiency.	Group dependency.
Q3	High self sentiment.	Poor self sentiment formation.
Q4	High ergic tension—excitable.	Low ergic tension—composed.

This may form a useful although inadequate guide for the comparisons below. However the reader is advised to consult the Bipolar descriptions of the Factor Source Traits as given in the 16 *PF* Handbook (1).

B. AGE LOADING

According to the test constructors the scores on some of the factors need corrections for age. In the figures presented below an attempt is made to correct the means of the Western Australian group. An analysis was made comparing a group of 92 male Humanities students in the 18-year-old group with a group of 55 mature age male Humanities students, average age 28 years. Age loadings appeared on some of the factors, and these, although smaller than those found by Cattell (2), are used to show corrected differences. If the Cattell corrections were used, different significant results would be obtained. Tentatively and on a limited analysis, the age corrections found on the Western Australian group are used to provide the corrected differences on the factors concerned.

Table 3 shows the raw score means and standard deviations for the American groups and for the Western Australian groups. Differences in means are shown and those which are significant are indicated. For those factors which are age loaded, differences are corrected and an attempt made to suggest the probable true differences. A comparison is made between Western Australian males and females.

TABLE 2
CORRECTION ADDED FOR EACH ADDITIONAL YEAR OF SUBJECT'S AGE

	American	West Australian
C	+0.1	nil
F	-0.1	-0.2
G	nil	+0.1
H	+0.3	+0.15
I	+0.3	nil
L	-0.3	nil
O	-0.4	-0.1
Q3	+0.2	+0.1
Q4	-0.4	-0.1

The comparison of American males with Western Australian males shows significant differences in the Factors *A*, *B*, *G*, *H*, *L*, *M*, *N*, and *Q2*. American males are more warm and sociable (*A*), less intelligent (*B*), more conscientious and persistent (*G*), more adventurous (*H*), less suspecting and jealous (*L*), less bohemian and introverted (*M*), less shrewd (*N*), and less self-sufficient (*Q2*). This pattern might be summarised as showing a warmer, more outgoing, open relaxed and group dependent type of personality than is evident in Western Australians. The age correction would leave all of these differences significant except for factor (*G*). This was only significant at 5 per cent level and would now show no significant difference.

The comparison of American females with Western Australian females shows significant differences in Factors *A*, *B*, *F*, *H*, *I*, *L*, *N*, *O*, *Q2*. American females are more warm and sociable (*A*), less intelligent (*B*), less surgent (*F*), more adventurous (*H*), less effeminate (*I*), less suspecting and jealous (*L*), less shrewd (*N*), less guilt prone (*O*), and less self-sufficient (*Q2*). The correction for age reduces the difference in Factor *F* to below significance level. American females appear to be (as was the case for males) more sociable, outgoing, relaxed, and group dependent, have fewer anxieties, and are rather more practical and less effeminate than Western Australian females.

According to the American figures (2) (but for Forms *A* and *B* combined), sex differences occur on Factors *E*, *I*, *M*, *N*, *O*, *Q1*, *Q2*, males being more dominant (*E*), less effeminate (*I*), less bohemian and introverted (*M*), more shrewd (*N*), less guilt prone (*O*), more radical (*Q1*), and more self-sufficient (*Q2*). The comparison of the scores of Western Australian males and females (but on Form *A* only) shows these factors to have significant sex differences, and in the same direction as for American males and females. Therefore the description above holds for the Western Australian groups.

TABLE 3
DIFFERENCES IN RAW SCORES ON 16 PF (FORM A) BETWEEN AMERICAN AND WESTERN AUSTRALIAN
MALES AND FEMALES

	American males (357)			W. Aust. males (290)			Diff. American first	Age corr. diff.	W. Aust. females (138)			Diff. American first	Age corr. diff.	W. Aust. sex diff. Males first
	Mean	S.D.	Mean	Mean	S.D.	Mean			Mean	S.D.	Mean			
A	8.9	3.3	8.0	3.4		9.8	+0.9*		8.7	3.3		+1.1*		-0.7
B	8.5	1.8	8.9	1.8		8.6	-0.4†		9.2	1.8		-0.6*		-0.3
C	17.3	3.2	17.4	3.4		16.4	-0.1		16.2	3.6		+0.2		+1.2*
E	14.5	3.8	13.9	3.9		12.6	+0.6		12.4	4.1		+0.2		+1.5*
F	14.6	3.6	15.1	3.9		14.8	-0.5	+0.1	15.8	3.8		-1.0†	-0.4	-0.7
G	12.0	3.2	11.4	3.0		12.3	+0.6†	+0.3	11.8	3.2		+0.5	+0.2	-0.4
H	12.7	5.0	10.3	4.7		12.9	+2.4*	+1.95*	10.4	4.8		+2.5*	+2.05*	
I	9.1	3.4	9.2	3.4		12.1	-0.1		13.0	3.0		-0.9*		-0.1
L	7.8	3.5	8.8	3.4		7.3	-1.0*		8.3	3.5		-1.0*		-3.8*
M	10.8	3.6	10.2	3.3		11.7	+0.6†		11.4	3.2		+0.3		+0.5
N	10.3	2.6	11.3	2.5		8.6	-1.0*		9.1	2.2		-0.5†		-1.2*
O	9.6	3.6	10.0	3.6		9.9	-0.4	+0.1	11.3	3.4		-1.4*		+2.2*
Q1	10.2	3.4	10.3	3.1		8.3	-0.1		8.7	3.2		-0.4		-1.3*
Q2	9.6	3.6	11.8	3.0		9.1	-2.2*		11.0	3.2		-1.9*		+1.6*
Q3	9.5	2.8	9.3	2.8		9.5	+0.2	-0.1	9.1	2.8		+0.4	+0.1	+0.8†
Q4	11.0	4.0	11.6	4.4		12.6	-0.6	-0.3	13.0	4.5		-0.4	-0.1	+0.2
														-1.4*

* Significant at 1 per cent level.

† Significant at 5 per cent level.

However two other factors appear in addition to those mentioned. Western Australian males are more mature (*C*) and have lower ergic tension (*Q*4).

It seems reasonable to accept (tentatively at least) that comparable American and Western Australian groups do in fact show differences in personality traits. Whether this difference would hold as a general rule we cannot say, but one may conjecture that it probably would. On the other hand, it appears to be true that the status and rôles of males and females are fairly similar in both groups, although there are variations on several factors. The age corrections can only be offered provisionally.

A final but important point in the comparison of American and Western Australian groups is that of considering the factors on which the groups do *not* differ. Emphasis on differences often directs attention from basic similarities. These groups do not differ on Factors *C*, *E*, *Q*1, *Q*3, *Q*4, and probably not on Factors *G* and *F*. Therefore one might say that on personality traits representing ego strength (*C*), dominance (*E*), radicalism (*Q*1), self sentiment formation (*Q*2), ergic tension (*Q*4) and probably super ego strength (*G*) and surgency (*F*), American male and female students are quite comparable with their Western Australian counterparts.

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STEREOTYPES OF MALE AND FEMALE UNIVERSITY STUDENTS IN INDIA TOWARD DIFFERENT ETHNIC GROUPS*

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A. INTRODUCTION

In view of the increasing functional interdependence among ethnic groups all over the world, the study of stereotypes has become more significant today than it ever was. People of one ethnic group harbour stereotyped images of other ethnic groups which influence their behavior toward them. These stereotypes may or may not have factual basis. While there are studies emphasising that some stereotypes may contain an element of truth (8, 13), there are others indicating that stereotypes may emerge without any objective basis (7, 10). But despite the controversy centering around the question of the extent to which stereotypes are founded on facts, this much seems certain that the way in which the members of one ethnic group perceive the members of another is a potent factor in determining their functional interrelationships. More important than how the people of one group perceive their own is how other groups perceive them. It is only by acquiring an adequate knowledge of beliefs, attitudes, and stereotypes held by different ethnic groups toward each other that efforts can be made to increase the sense of mutual understanding and coöperation which may ultimately help materialise the concept of one world that is gaining ground today.

Walter Lippmann (11) referred to the influence upon behavior of stereotypes or "pictures in our head." Katz and Braly (9) studied racial stereotypes of 100 Princeton students. Reports of a number of studies on stereotypes have since appeared. Some of the significant studies are those of Bayton (1), Bayton and Byoune (2), Buchanan (3), Dudycha (4), Eysenck and Crown (5), Gilbert (6), Rath and Das (12), Schoenfeld (14), Vinacke (15), and Zaidi and Ahmed (16).

B. PURPOSE

This study was undertaken (a) to explore the stereotypes of university students toward Indians and eight other ethnic groups; (b) to see the dif-

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ference, if any, between the stereotypes of male and female students toward those groups; (c) to know the difference, if any, in the ranking of the nine ethnic groups by both male and female students on the basis of desirability of the assigned characteristics; (d) to know the difference, if any, between the ranking of the nine ethnic groups by male and female students on the basis of preference for association; and (e) to find out the relationship between the ranking on the basis of desirability of characteristics and the ranking on the basis of preference for association for both male and female students.

C. METHOD

1. *Subjects*

The subjects were 100 male and 100 female students of Patna University selected at random from both undergraduate and postgraduate classes.

2. *Materials*

1. A list of 80 characteristics was prepared on the basis of the materials obtained from different studies of stereotypes and the pilot study done with 25 university students as subjects in which they were asked to state as many characteristics as they thought typical of the following nine ethnic groups: Americans, Chinese, English, French, Germans, Indians, Negroes, Pakistanese, and Russians.

2. A check list of the same 80 characteristics was prepared for rating on a 3-point scale on the basis of their desirability.

3. A list of nine ethnic groups was prepared for ranking on the basis of preference for association with the members of those groups.

3. *Procedures*

1. All the 200 subjects were given the list of 80 characteristics and asked to select from the list those five characteristics which seemed to them to characterize best each of the nine ethnic groups.

2. The subjects were then given the check list and asked to rate each characteristic on a 3-point scale on the basis of desirability.

3. Finally, the subjects were given the list of nine ethnic groups and asked to put in rank order the nine ethnic groups on the basis of preference for association.

D. RESULTS AND DISCUSSION

The first purpose of the investigation was to explore the stereotypes of university students toward Indians and eight other ethnic groups. And for

this, the subjects were asked to select from the list of 80 characteristics five such characteristics as they thought characterized the different ethnic groups best. Table 1 presents the percentage of each of the 10 most frequently assigned characteristics to each ethnic group in rank order.

TABLE 1
TEN MOST FREQUENTLY ASSIGNED CHARACTERISTICS TO THE NINE ETHNIC GROUPS
BY 200 SUBJECTS IN RANK ORDER

Characteristics assigned rank order	No.	Per cent	Characteristics assigned rank order	No.	Per cent
<i>Americans</i>					
Active	103	51.5	Scientifically minded	38	19.0
Materialistic	53	26.5	Cultured	34	17.0
Ambitious	52	26.0	Diplomat	32	16.0
Industrious	51	25.5	War-monger	32	16.0
Adventurous	38	19.0	Proud	30	15.0
<i>Chinese</i>					
Artistic	94	47.0	Honest	34	17.0
Religious	62	31.0	Nationalistic	29	14.5
Industrious	48	24.0	Brave	26	13.0
Friendly	39	19.5	Cultured	25	12.5
Progressive	35	17.5	Active	24	12.0
<i>English</i>					
Adventurous	61	30.5	Brave	40	20.0
Active	53	26.5	Diplomat	37	18.5
Cultured	53	26.5	Industrious	37	18.5
Tradition loving	50	25.0	Democratic	35	17.5
Intelligent	41	20.5	Proud	30	15.0
<i>French</i>					
Artistic	52	26.0	Impulsive	26	13.0
Pleasure loving	48	24.0	Showy	26	13.0
Cultured	39	19.5	Talkative	25	12.5
Musical	37	18.5	Nationalistic	24	12.0
Passionate	34	17.0	Sentimental	21	10.5
<i>Germans</i>					
Brave	60	30.0	Ambitious	29	14.5
Scientifically minded	55	27.5	Active	27	13.5
Intelligent	54	27.0	Aggressive	25	12.5
Industrious	50	25.0	Cultured	24	12.0
Progressive	33	16.5	Efficient	23	11.5
<i>Indians</i>					
Peace loving	99	49.5	Democratic	38	19.0
Religious	80	40.0	Friendly	37	18.5
Kind	63	31.5	Superstitious	34	17.0
Philosophical	43	21.5	Idealistic	30	15.0
Hospitable	42	21.0	Easily satisfied	27	13.5
<i>Negroes</i>					
Backward	111	55.5	Brave	51	25.5
Uncultured	103	51.5	Cruel	41	20.5
Dull	62	31.0	Easily satisfied	23	11.5
Physically dirty	54	27.0	Stupid	23	11.5
Unartistic	52	26.0	Faithful	22	11.0

TABLE 1 (continued)

Characteristics assigned rank order	No.	Per cent	Characteristics assigned rank order	No.	Per cent
<i>Pakistanese</i>					
Cruel	62	31.0	Cheat		
Selfish	56	28.0	Aggressive	40	20.0
War-monger	56	28.0	Intolerant	38	19.0
Greedy	51	25.5	Stupid	36	18.0
Religious	50	25.0	Proud	35	17.5
				32	16.0
<i>Russians</i>					
Scientifically minded	89	44.5	Ambitious		
Progressive	76	38.0	Brave	40	20.0
Active	55	27.5	Materialistic	36	18.0
Adventurous	45	22.5	Practical	34	17.0
Industrious	43	21.5	Intelligent	34	17.0
				28	14.0

Out of 10 most frequently assigned characteristics to Americans, materialistic, ambitious, and industrious are identical with those found in Katz and Braly's (9) study; and industrious, diplomat, and war-monger with Rath and Das' (12) study. So far as the characteristics assigned to Chinese and Das' (12) study; artistic and religious are identical with Rath and Das' (12) study; artistic with Zaidi and Ahmed's (16), and religious and industrious with Katz and Braly (9). In regard to English, tradition loving, intelligent, and industrious are in common with Katz and Braly (9); diplomat and industrious with Rath and Das (12); and democratic with Zaidi and Ahmed (16). In the case of French, artistic is in common with Zaidi and Ahmed's (16) study. Scientifically minded, intelligent, industrious, progressive, and efficient are the characteristics assigned to the Germans in common with Katz and Braly (9); and brave, intelligent, and aggressive with Zaidi and Ahmed (16). In regard to Indians, peace loving, religious, hospitable, and idealistic are in common with Rath and Das (12); and religious and superstitious with Zaidi and Ahmed (16). Two characteristics, i.e., physically dirty and stupid assigned to Negroes are the same as in Katz and Braly's (9) study. As regards Russians, industrious is in common with Rath and Das' (12) study.

The 10 most frequently assigned characteristics to the nine ethnic groups by the male and female groups are presented in Table 2.

When the characteristics assigned to the different ethnic groups by the male students are compared with those by the females, the extent of agreement between them becomes evident. Table 3 summarizes the percentage of agreement between them in rank order.

TABLE 2
TEN MOST FREQUENTLY ASSIGNED CHARACTERISTICS TO NINE ETHNIC GROUPS
BY 100 MALE AND 100 FEMALE STUDENTS

Characteristics assigned rank order	Males Per cent	Characteristics assigned rank order	Females Per cent
<i>Americans</i>			
Active	48	Active	55
Industrious	31	Adventurous	30
Materialistic	29	Ambitious	26
Ambitious	26	Materialistic	24
Exploiter	24	Brave	21
Scientifically minded	23	Cultured	21
Democratic	18	Industrious	20
Diplomat	17	Intelligent	20
Progressive	17	War-monger	16
Proud	17	Scientifically minded	15
<i>Chinese</i>			
Artistic	34	Artistic	60
Religious	31	Religious	31
Industrious	30	Friendly	19
Brave	21	Industrious	18
Friendly	20	Progressive	16
Honest	19	Honest	15
Progressive	19	Nationalistic	15
Nationalistic	14	Cultured	14
Active	13	Philosophical	14
Democratic	12	Hospitable	12
<i>English</i>			
Adventurous	31	Cultured	31
Active	26	Adventurous	30
Intelligent	24	Brave	29
Tradition loving	24	Active	27
Cultured	22	Tradition loving	26
Diplomat	20	Industrious	23
Democratic	19	Proud	21
Honest	18	Diplomat	17
Opportunist	18	Intelligent	17
Ambitious	16	Democratic	16
<i>French</i>			
Artistic	26	Artistic	26
Pleasure loving	23	Pleasure loving	25
Passionate	22	Musical	23
Cultured	21	Musical	18
Showy	17	Cultured	16
Musical	14	Impulsive	15
Democratic	12	Talkative	13
Nationalistic	12	Idealistic	13
Individualistic	11	Social	12
Sentimental	11	Friendly	12
<i>Germans</i>			
Brave	33	Nationalistic	30
Scientifically minded	29	Intelligent	27
Industrious	25	Brave	26
Intelligent	24	Scientifically minded	25
Ambitious	21	Industrious	25
		Progressive	21

TABLE 2 (continued)

Characteristics rank order	Males assigned	Per cent	Characteristics rank order	Females assigned	Per cent
<i>Germans (cont.)</i>					
Active		16	Practical		15
Aggressive		15	Cultured		13
Nationalistic		15	Proud		13
Adventurous		13	Diplomat		12
Efficient		12	Efficient		11
<i>Indians</i>					
Peace loving		47	Peace loving		52
Religious		40	Religious		40
Kind		28	Kind		35
Democratic		25	Hospitable		25
Hospitable		20	Philosophical		23
Philosophical		20	Friendly		21
Superstitious		18	Faithful		20
Backward		17	Artistic		16
Friendly		16	Idealistic		16
Cultured		14	Honest		15
<i>Negroes</i>					
Backward		57	Backward		54
Uncultured		56	Uncultured		47
Physically dirty		35	Dull		32
Dull		30	Brave		31
Unartistic		27	Unartistic		25
Brave		20	Cruel		22
Cruel		19	Physically dirty		19
Faithful		13	Stupid		13
Easily satisfied		12	Easily satisfied		11
Hot tempered		11	War-monger		11
<i>Pakistanese</i>					
Cruel		29	Cruel		33
Religious		27	Selfish		33
Aggressive		26	War-monger		31
War-monger		26	Greedy		26
Greedy		25	Cheat		23
Selfish		23	Religious		23
Stupid		20	Suspicious		21
Intolerant		19	Proud		20
Cheat		17	Intolerant		17
Inefficient		17	Stupid		15
<i>Russians</i>					
Scientifically minded		51	Progressive		41
Progressive		35	Scientifically minded		38
Active		33	Adventurous		23
Industrious		25	Active		22
Adventurous		22	Ambitious		18
Ambitious		22	Industrious		18
Brave		19	Brave		17
Materialistic		17	Materialistic		17
Practical		17	Practical		17
Efficient		15	Cultured		16

TABLE 3
PERCENTAGES OF AGREEMENT BETWEEN 100 MALE AND 100 FEMALE STUDENTS IN 10
MOST FREQUENTLY ASSIGNED STEREOTYPES TO THE NINE ETHNIC GROUPS

Ethnic groups	Percentage of agreement in rank order
Russians	90
Negroes	80
Pakistanese	80
Chinese	70
English	70
Indians	60
Americans	50
French	50
Germans	50

From Table 3, it will be clear that the minimum percentage of agreement between males and females is 50 and the maximum 90. The maximum agreement is in the characteristics assigned to the Russians and the minimum to Americans, French, and Germans. It is rather surprising to find that the agreement in the case of Indians is not high. Thus it may be seen that greater familiarity is not necessarily an index of higher agreement. However, it is evident that males and females have considerable agreement in their stereotypes toward the different ethnic groups.

When the 10 most frequently assigned characteristics to the different ethnic groups by both male and female groups are categorised on the basis of their desirability or otherwise, the picture that emerges is as in Table 4.

TABLE 4
PERCENTAGES OF DESIRABLE, NEUTRAL, AND UNDESIRABLE CHARACTERISTICS

Ethnic Groups	Male Percentage of			Female Percentage of		
	Desirable	Neutral	Undesirable	Desirable	Neutral	Undesirable
Americans	80	0	20	80	10	10
Chinese	100	0	0	90	10	0
English	80	20	0	70	20	10
French	70	30	0	80	10	10
Germans	90	0	10	80	10	0
Indians	80	0	20	90	10	90
Negroes	20	10	70	10	0	90
Pakistanese	10	0	90	10	0	90
Russians	100	0	0	90	10	0

Table 4 shows that the males assigned maximum desirable characteristics to the Chinese and Russians, and minimum to the Pakistanese. The females, on the other hand, gave maximum desirable characteristics to Indians, Chinese, and Russians, and minimum to Negroes and Pakistanese.

The nine ethnic groups were ranked on the basis of desirability of

characteristics assigned to them by both males and females, and the rank difference coefficient of correlation was computed. The rho coefficient was .75 which is significant beyond .05 level of confidence. It is clear that there is no significant difference in the ranking of nine ethnic groups on the basis of the desirability of the assigned characteristics by both male and female students. In other words, male students assigned favourable and unfavourable characteristics to the different ethnic groups in about the same way as the females did.

The data for ranking on the basis of preference for association by both male and female students are summarized in Table 5.

TABLE 5
PREFERENTIAL RANKING FOR ASSOCIATION BY MALE AND FEMALE STUDENTS

Ethnic groups	Male average rank	Female average rank
Indians	7.20	8.04
Russians	6.35	6.42
English	6.24	6.29
Americans	5.94	6.38
Chinese	4.80	4.49
Germans	4.74	4.53
French	4.65	4.44
Pakistanese	2.61	2.14
Negroes	2.30	1.91

On a careful study of Table 5, it will be clear that there is a marked similarity between the preferential ranking of males and females. Both males and females have placed Indians at the top and Negroes at the bottom. The rank difference coefficient of correlation was found to be .97 which is significant beyond .01 level of confidence. This shows that both males and females ranked the different ethnic groups in about the same order of preference.

In order to find out the relationship between the ranking on the basis of desirability of characteristics and the ranking on the basis of preference for association, the rank difference coefficient of correlation between the two for both the sexes was obtained. The rho coefficients obtained for males and females were .61 and .71 respectively, which are significant beyond .05 level of confidence. Thus it can be said that there is no significant difference between the ranking on the basis of desirability of characteristics and the ranking on the basis of preference for association in both male and female groups. This clearly indicates that preference for association is definitely related to stereotypes. The rather low rho coefficients, however, indicate that preferential ranking for association is not entirely a function of stereotypes. There may be other factors influencing preferential ranking for association

different from those included in the list of characteristics provided. In short, it can be said that preferential ranking for association is only in part a function of the stereotypes held.

E. SUMMARY

The purpose of this investigation was to find out the stereotypes of 100 male and 100 female university students toward Indians and eight other ethnic groups, namely, Americans, Chinese, English, French, Germans, Negroes, Pakistanese, and Russians. The findings were as follows:

1. Males and females showed considerable agreement in their stereotypes toward the nine ethnic groups. The maximum agreement was in the characteristics assigned to the Russians, and the minimum to Americans, French, and Germans. The agreement in the case of Indians was not high. Thus it was evident that higher agreement was not necessarily based on greater familiarity.

2. There was no significant difference in the ranking of nine ethnic groups on the basis of the desirability of the assigned characteristics by both male and female students. The males assigned maximum desirable characteristics to Chinese and Russians, and minimum to the Pakistanese. The females gave maximum desirable characteristics to Indians, Chinese, and Russians, and minimum to Negroes and Pakistanese.

3. The data for ranking on the basis of preference for association showed a marked similarity between the preferential rankings of males and females. The rho coefficient was significant beyond .01 level of confidence.

4. No significant difference was found between the ranking on the basis of desirability of characteristics and ranking on the basis of preference for association in both male and female groups. The rather low rho coefficients, however, indicated that preferential ranking for association is not entirely a function of stereotypes.

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SELF CONCEPTS AND SOCIAL STATUS IN SOUTH AFRICA: A PRELIMINARY CROSS-CULTURAL ANALYSIS*

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A. INTRODUCTION AND PROBLEM

Even without the aid of the sophisticated apparatus of social-psychological investigation, it has long been suspected that within the broad generalizations of the 'culture-personality' approach a specific problem arises of analyzing the effects of membership of subcultures upon the personalities of their members. In the particular context of the contribution of social psychology to political science, the interesting question is to relate personality formation to the patterns of domination and subordination exemplified by the political and social structure and system of a state, and to estimate the effect on personality of the schism between the aspirations and the opportunities of the members of the subordinate class.

From the point of view of a political scientist, Arendt (2) has analyzed certain alleged personality characteristics of Boers and Africans in terms of the society in which they lived:

Black slaves in South Africa quickly became the only part of the population that actually worked. Their toil was marked by all the disadvantages of slave labor, such as lack of initiative, laziness, neglect of tools, and general inefficiency. Their work therefore barely sufficed to keep their masters alive and never reached the comparative abundance which nurtures civilization. It was this absolute dependence on the work of others and complete contempt for labor and productivity in any form that transformed the Dutchman into the Boer.

It is unnecessary to labor the hypothesis that in a society, divided as South Africa into two broad groups, one in possession of the overwhelming share of the social, political, and economic power, privilege and advantages, and the other overwhelmingly deprived of these—representatives of either group may differ significantly in personality characteristics from representatives

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of the other. We might expect, for example, that the deprived group members have lower aspirations and goals than members of the satisfied group; or that members of the deprived group combine lower practical aspirations with unrealistic distant goals, such as for a radical change in their group's economic and political status and power. We might expect the deprived group members to express a lower degree of satisfaction and certainty than the satisfied, that the ego ideal of the member of the deprived group will be less elevated, less stable, less rich than that of the satisfied group. "Men lose their higher aspirations as they lose their intellectual tastes, because they have not time nor opportunity for indulging them; and they addict themselves to inferior pleasures not because they deliberately prefer them, but because they are the only ones to which they have access" (7).

B. METHOD

In the course of a cross-cultural survey of the attitudes of students in certain South African universities to major social, political, moral, religious, and esthetic controversial issues (4), the author included a section consisting of five projective-type questions designed to reveal personality differences (if any) between the members of the major ethnic groups investigated, in terms of their aspirations, expectations, fears . . . in relation to the social pressures and opportunities affecting them. Some of the questions were adapted from that treasure chest (1) but it is regretted that we did not find it possible to follow up the administration of the questionnaires by intensive interview.

1. *Subjects*

The subjects of the investigation were (a) 21 white students of the Pietermaritzburg Campus of the University of Natal, a completely white campus; (b) 27 African and 2 Colored students at Fort Hare University College, a campus only for non-whites; (c) 19 white students at the Durban campus of the University of Natal, a partially integrated campus in its Arts and Social faculties, and in which a small degree of social mixing occurs between whites and non-whites outside the classroom; (d) 25 African, Indian and Colored students at the Durban campus of the University of Natal; $N = 94$.

All the subjects were students taking either Course I or II in Political Science. At the time the investigation was carried out, during March of 1959, the university sample appeared adequately to represent Arts and Social Science students in the three main types of English-speaking universities in South Africa, but legislation promulgated in 1959 now completely segregates

the universities so that not only may whites and non-whites not study together, but even various groups of non-whites may not study together.

2. Procedure

Each subject was asked general information about age, sex, ethnic group, home language . . . and was asked to write fully and in confidence on the following topics. No student refused to co-operate; none gave answers that suggested anything less than a high degree of frankness and interest.

It was not found possible in practice to distinguish the answers of males from the few females, nor to distinguish the answers of the tiny Colored group, whose answers were assimilated into the mass of the non-whites, except where they significantly stood out. It must be noted that the Colored group in South Africa are Colored alone in terms of legislative definition and the social prejudices and discrimination against them, but that they "are not in the margin of the white and African cultures: their culture is essentially the same as the whites" (6). However, it appeared from our sample that the Colored were akin to the Africans and Indians in their feelings of conflict and rejection by the dominant white groups, although objectively they share white culture. It must be remembered too that many of the African students and most (if not all) of the Indian students essentially share the culture of the whites, though legislation and social usage deprive them of any but meager participation.

The author found suggestions that there were differences of outlook between the Africans and the Indians. The generally calmer and less strident tone of the Indians (mostly in the Durban campus), and their individual and cultural sophistication (in 'western' terms), reflect the peculiar position of the Indian students at the University of Natal, many of whom are socially insulated from some of the irritations of a non-white living in South Africa by their belonging to well-to-do families; a further insulating factor is that, compared with the Africans, the Indians have a lengthy tradition of urban life, and still retain to some extent the traditions, religion, and custom of their original home though to a very large extent they are culturally 'South Africans.' It is interesting that in their answers the Indians refer to 'social class,' a concept that is never referred to by the African students.

The projective questions were as follows:—

1. If you could change yourself in any way you liked, in what way would you like to change?
2. What sort of person do you most despise?
3. What sort of person do you most admire?

4. What is your highest secret ambition or goal?
5. Give a rough sketch of what sort of person you expect to be in ten years' time.

The author intended to classify the items of the responses by the technic employed in the fundamental systematic source (1), but in the interest of the peculiar nature of much of the material, more of which centered about politico-social issues than among a comparable group of American or English students, we devised our own categories (more or less ad hoc in terms of the needs of the overall research), but in such a way as to display the strivings, valuations, and motivations that each item suggests. The categories into which the questions are divided are interpretive and emphasize the clinical meanings of the responses (8). The number of categories for each question varied widely from three in Question 2 to 10 in Question 5, though in the latter the categories have been combined to facilitate statistical analysis. The answers of the students were surprisingly rich in content, the non-white students frequently illustrating their answers prolifically, and it proved in practice easy to allot each item to its category.

C. RESULTS

In analyzing (4), the differences between the whites and the non-whites were so marked that we felt that they should not be shrouded behind the anonymity of a label. The dominant tone of the answers of the whites who wished for a 'social' change were the conventional wishes for prosperity, happier family life, and their total number of such wishes are insignificant compared with their non-social areas of desired change. On the other hand, the non-whites are overwhelmingly concerned with 'social' change, no doubt in response to the inexorable and intolerable pressures of a social system in which they are forbidden to participate as full citizens, and in which many of them (as items in the questionnaire reveal) believe that there is no immediate possibility that they might participate fully (Table 1).

There were, for example, the following responses from among the non-whites: the wish "to belong to an unsuppressed group," to mix freely with other races or to enjoy the freedom of other races, "to lose race or color consciousness," "to understand the minds of the extreme anti-non-white," to have freedom of movement and of education. One pathetic plea: "I want to live, not exist." Other similar responses were various wishes to "revolutionize South Africa," "to remedy injustice," to be a great leader of the non-white peoples, and one African student wanted to be a great poet, but not for the conventional reasons, however. "If I could suddenly be endowed

TABLE 1
QUESTION 1

Definition of category	Non-Whites	Whites
1. More intelligent, better scholar, think clearly, more imaginative	4	12
2. Morally better, less complacent, religious faith, less selfish, more tolerant, honest, sympathetic	5	21
3. 'Better' personality, courage, stability, will to act, more attractive, stronger	5	11
4. Social situation or status ameliorated: live in large family, wealthier, freer politically	20 11	1 7
5. Satisfied or no change desired	45	52

Chi squared = 33.97; 4 degrees of freedom.

with the ability to express in poetic language the disgust and distress the South African problems arouse in me, I would be pleased. The poetic ability is to be used to arouse other peoples' consciousness to the seriousness of the present situation, and to urge them to do something about it."

Included in Category 5 are three responses in which two Africans qualified their desire not to change by commenting that they were proud of belonging to a particular tribe—a reflection rather of nascent nationalism or moribund tribalism than of self-confident pride. None of the white students commented on his/her responses. Two unrecorded responses by Africans was the desire to change sex from male to female. One Indian student wished not to change himself as an individual, but to live in a society in which he would not be humiliated or deprived because of his color.

Categories 1 and 2 have been divided for convenience (Table 2), because the groups in Category 2 stand out by the number of appearance. There were only seven people or groups of people mentioned specifically by name, and these were only mentioned by the non-white groups: among them were the South African police, the Dutch Reformed Church, the present Prime Minister of South Africa (twice) and Hitler (with a clear reference to the

TABLE 2
QUESTION 2

Definition of category	Non-Whites	Whites
1. Conventionally unpleasant: dishonest, 'weak,' irresponsible, selfish, obstinate, narrow-minded	14	14
2. Conventionally unpleasant: hypocritical, priggish, conceited	8	17
3. Social/Political qualities: belief in 'racial' superiority, 'reactionary,' 'exploiters,' 'nationalists'	19	4

Chi squared = 12.66; 2 degrees of freedom.

parallels between the 'racial' situation in Nazi Germany and in South Africa. As in Question 1, the frequent glosses on the responses of the non-whites, suggest that even when they respond by mentioning conventionally unpleasant qualities such as 'weakness' or 'narrowmindedness,' their responses are tinged strongly with their social-political preoccupations. Again, however, we have the impression that the Indians seem to be slightly less embittered than the Africans.

By far the greater number of responses of the whites to Category 1 was 'intelligent,' this making about 40 of the responses and leaving an insignificant number of other responses in this category. The non-whites too respond largely in conventional terms of individual qualities, but answer nearly as many items in the social-political terms. Again we found that even their answers in conventional terms are frequently elaborated and related to their overall plea for 'racial' tolerance (Table 3).

TABLE 3
QUESTION 3

Definition of category	Non-Whites	Whites
1. Conventional individual qualities: strength, intelligence, sincerity, practicalness, 'helpfulness'		
2. Conventional individual qualities: to be moral, religious	25	53
3. Social-political: not 'racially prejudiced,' tolerant, humanitarian	7	8
4. Social-political: 'fighters for freedom'	13	4
5. Individuals mentioned by name:		
a. South African leaders, e.g., Chief Luthuli, Trevor Huddleston	6	0
b. Artistic, literary, e.g., Orwell, Camus	4	2
c. Religious, humanitarian, e.g., Schweitzer	0	9
d. Politico-military, Churchill	0	3
	0	1

The difference in emphasis between the whites and the non-whites is again marked (Table 4). On the whole the white students appear to be reasonably satisfied with their lives and reasonably secure; their ambitions modestly conventional and confined to goals similar to those for which one might expect young persons to aspire in many societies. One can infer from their few answers to Categories 5 and 6 that they are not strongly moved by any sense of urgency and disquiet at the uneasy state of their society, nor does their mild wish 'to serve humanity' display any burning desire to battle with the poverty and indignity that exist on their very doorsteps. The non-whites on the contrary are dominantly concerned with the problems of their communities, communities which are seen by them as underprivi-

leged, of low social status, and treated unjustly by the ruling white classes. Even professional and social success was elaborated, e.g., a wish to be a successful lawyer would be an aspiration for a man 'to raise the common people.'

TABLE 4
QUESTION 4

Definition of category	Non-Whites	Whites
1. Happy family and home	3	6
2. Professional and social success	14	21
3. Hedonistic, e.g. travel, wealth	2	4
4. Self-betterment, e.g. to become well-educated, 'peace,' security	2	6
5. To serve humanity	8	7
6. To change society, to be politically active	22	2

Chi squared = 21; 2 degrees of freedom.

The strong suggestion of striving for success by non-whites in a society loaded against them, probably has sinister implications for mental health, as it certainly has for social-political stability.

When the structure embraces conflicting principles of social organization based upon incompatible values, psychical conflicts inevitably result. For example, ends may be presented to one group as possible and desirable, when in fact they are made impossible for that group by a conflicting mode of dominance The behavior of individuals caught in this situation manifests frequent attempts to escape an unbearable reality. Reality seems unbearable, however, only when another reality exists as a *conceivable* alternative; and another is conceivable only when it forms part of the social system and exists as a possibility within the cultural ideology. Mental conflict is engendered, then, not so much by the vertical structure itself, as by inconsistency within the structure (5).

In South Africa (as to a lesser extent though similarly in the Deep South of the USA), the 'capitalist' values centered about self-improvement, striving to rise in the social-class scale, of giving one's children an education and professional start in life better than one's own . . . , are penetrating all but the most remote and culturally isolated groups. Though illiteracy is still high and opportunities for the non-whites to raise their social status *in terms of the dominant social-political groups* in their society, i.e., the whites, are few, the socio-economic pressures are compelling mobility, competition, urbanization, and a shift from 'tradition direction' to 'other direction.' Government policy is ambivalent, wavering uncertainly between bolstering the crumbling ruins of tribalism and hindering the movement to the towns (on the one hand), and providing an ideologically and politically

loaded 'western' education and technical training on the other. Further: the 'race' attitudes of the overwhelming majority of whites are, at the best, indifferent to the fate of the non-white, and at the worst are frankly hostile, prejudiced, and ignorant of the problems of adjustment facing both the non-whites and the whites in this rapidly changing continent. It can be argued that every educated non-white, including the few though increasing professional men, is a marginal man with the difficulties of adjustment peculiar to marginal man. His values and orientation are towards full-membership in that vague complex we call 'western civilization,' yet he is unfranchised humiliated by segregation laws, and subject to the same rebuffs, hostility and even violence as his non-educated fellows. (It was unfortunate that the subjects did not include more representatives of the 'Colored' community in South Africa, in whom one might have found more clearly evidence of the precise degree of 'marginality.' The few Colored subjects, showed extreme hostility towards the whites, and an acute awareness of their ambivalent position in the community, but most were of a low degree of passability, which might affect their relations with whites (6).

TABLE 5
QUESTION 5

Definition of category	Non-Whites	Whites
1. Culturally, intellectually maturer, wiser, happier, richer		
2. Successful in marriage	16	16
3. Successful in marriage, profession, academically	11	12
4. Economically secure	31	27
5. Politically, socially free	5	0
6. Politically, socially active	6	0
7. Little or no change	14	1
8. No idea, impossible to say	1	1
9. Change for worse, cynical, can expect nothing	3	9
10. Answers qualified by reference to social and political uncertainty in South Africa	1	3
	21	0

Chi squared = 18.84; 2 degrees of freedom.

For the purposes of evaluation the categories were grouped as follows:

1 — 4, 5 — 6, 7 — 9.

It becomes almost tedious for the author to draw attention again to the contrasting emphases of the non-whites and the whites (Table 5). The non-whites responded highly emotionally, expressing sharply and without restraint their feelings of disability, insecurity, and sometimes despair, in their present situation. One extreme statement is that of an Indian, aged 23: "In ten years' time I expect to be one who is brave to face any man on any issue. If possible to spend my time in jail as long as my fellow countrymen enjoy the

benefits which I should be fighting for. . . . If possible to achieve a true democracy for all in South Africa. . . ." Yet another young man, an African wrote: "What I will be in ten years' time depends largely upon the government of this country. If their policies come to fruition then I'll most probably be a small-time lawyer or court clerk in some backward Bantustan, under a semi-literate 'Bantu authority.' If, however, the present government is thrown out within five years, then I visualise myself as a not very well to do lawyer, but with prospects for development." An Indian expressed poignantly a common lament: "In ten years' time I suppose I would be a qualified teacher. It's not that I really wanted to become a teacher, I have been virtually compelled to enter the profession because of the limited opportunities open to a person of my color. I shall have to accept it and continue to live as an underprivileged person, with very little opening for improving my position." A few students, mostly the Indians, who have some social position and economic security at the moment, expressed uncertainty about the future; so a business man writes: "I am at present an Indian business man and since so many legislations are being introduced daily to deprive us of our livelihood and everything that gives meaning to our lives, it makes it difficult to explain, especially when the future seems so dark. . . ."

None of this overwhelming fear of the future, tinged with faint hope at a drastic change in the socio-political situation is expressed by the whites, though the whites' responses to Categories 7 through 9, suggest an uneasiness that did not appear in the previous question. Of the non-whites' answers about 50 per cent are modified by qualifications in terms of the political-social future of South Africa, and even where there was no direct qualification, in many answers this doubt could be inferred from the general tone of the answers of the subjects to the whole questionnaire.

D. CONCLUSION

We cannot avoid stepping out of the sterile rôle of social scientist to deplore the lack of hope, the wastage of potential in a country with inadequate educational and social services, and few opportunities for the non-whites who comprise 75 per cent of the total population, and whose slender weight of opportunity is amply outweighed by the heavy and crushing burden of discouragement.

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WESTERN AUSTRALIAN RESULTS ON AN EDUCATIONAL ATTITUDES SCALE*

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A. INTRODUCTION

Kerlinger (2, 3, 4) has suggested that behind educational attitudes there lie two basic attitudes, "Restrictive-Traditional" and "Permissive-Progressive." The restrictive-traditional educational viewpoint emphasizes subject matter for its own sake, external discipline, and social beliefs which tend towards conservatism and the preservation of the status quo. Superior-inferior relationships are impersonal and structured in hierarchical fashion, "morality" is strongly emphasized and based on an external "higher" authority. The permissive-progressive tends to concentrate on problem solving rather than on subject matter and facts, considers education as a growth process basically determined by child needs and interests. He is concerned with equality and warmth in interpersonal relationships, has liberal social beliefs which emphasize education as an instrument of social change, believes in internal discipline and a morality based on social and individual responsibility.

From the original statements used for the *Q*-sorts, Kerlinger constructed two 20-item scales each with 10 *A* (progressivism) and 10 *B* (traditionalism) items. Educational Scale I (*ES-I*) is a 7-point Likert-type scale and Educational Scale II (*ES-II*) a rank-order forced-choice scale with a total of 10 items each consisting of a tetrad (4). It is with these two scales that this report is concerned. As certain of the hypotheses on which Kerlinger's original work is based are sociological in nature, it was thought desirable to try out the scales with certain groups in this community as part of an investigation into the educational attitudes of members of the Western Australian Education Department.

B. SUBJECTS

So far, three different groups have completed one or both scales. Seventy-seven University students taking Education courses in the Faculty of Edu-

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cation have done both scales, 439 members of the Education Department have done *ES-I* and 425 *ES-II*; and 38 Trade Union secretaries and presidents have done *ES-I*. The Trade Union officials and Education Department personnel were written to and the completed scales returned by post. It was hoped that a representative sample of the Education Department could be obtained, and all supervisory and specialist officers, Teachers' College lecturers, and Heads of Secondary Schools were included. A 50 per cent sample was drawn from large Primary Schools, a 33 per cent sample from rural one-teacher schools, and a 10 per cent sample from teachers in primary and secondary schools. The proportion of these scales returned was from 68 per cent to 79 per cent.

C. RESULTS AND DISCUSSION

Each scale was scored for each factor, producing an *A* score (Progressive-Permissive) and a *B* score (Restrictive-Traditional); a difference score (*A-B*) was also computed. The total scores were divided by 10 to give a mean score. In Table 1 are reproduced Kerlinger's original results for his U.S. Samples, with which will be compared some Western Australian figures.

TABLE 1
SCORES OF DIFFERENT GROUPS ON *ES-I* & *ES-II*
(After Kerlinger—Unpublished Material)

Scale		<i>ES-I</i>			<i>ES-II</i>		
Score		Undergrad.	Graduate	Outside people	Undergrad.	Graduate	Outside people
<i>A</i>	N	136	157	305	136	157	305
	M	5.46	5.57	4.87	3.02	3.13	2.77
	σ	.67	.76	.94	.41	.46	.60
<i>B</i>	M	4.43	3.84	5.19	2.33	2.08	2.52
	σ	.84	.93	.86	.58	.47	.63
<i>(A-B)</i>	M	1.03	1.72	-.32	.69	1.06	.26
	σ	1.16	1.41	1.39	.88	.84	1.11

Kerlinger's results show significant differences between his three groups except for the *A* scores on *ES-I* and *ES-II*. Results were obtained for 77 Western Australian University students (shown in Table 3) this sample consisting of those doing Education courses, both undergraduates enrolled for the B.Ed. or B.A. degrees, and graduates from other faculties in the post-graduate Diploma of Education. To have separated these would have meant extremely small groups; instead they were combined with 26 B.Ed. graduates from the teacher sample. Kerlinger's undergraduate and graduate groups were also combined for purposes of comparison with this local group.

In view of the likely differences in course requirements and standards between a U.S. and an Australian University, it was thought that these would be similar groups. Results for these two groups are shown in Table 2.

TABLE 2
MEAN SCORES OF UNITED STATES AND WESTERN AUSTRALIAN STUDENTS OF EDUCATION

Scale		ES-I		ES-II	
		U.S.	W.A.	U.S.	W.A.
	N	293	103	293	103
A	M	5.52	5.47	3.08	3.05
	σ	.72	.66	.44	.44
				2.20	2.12
B	M	4.11	4.04	.52	.46
	σ	.89	.83	.88	.93
				.86	.79
(A-B)	M	1.40	1.42		
	σ	1.30	1.18		

There are no significant differences on any score on either scale. Indeed, it is extremely rare to find such close agreement between the scores of two samples. It would appear that students who are or have recently been enrolled in Education courses in this University are not significantly different in their educational attitudes as measured by these scales from students in a School of Education at a particular American eastern University.

Table 3 shows the results for University students in Education Courses, for the Education Department sample, and for Trade Union Presidents and Secretaries. Kerlinger's outside or other people group were mainly business men: here Trade Union Secretaries and Presidents were chosen because they were in an occupation quite distinct from the other two groups and because their addresses were readily available. They did ES-I only.

ES-I scores show highly significant differences between the three groups for B and (A-B) scores. There are no significant differences in A scores between the Education Department group and the outside people but the Student group is different from the other two. On ES-II there is a highly significant difference on all scores between students and Education Department people.

In general, it will be seen that these results are of the same order as Kerlinger's and show the same differentiation between groups. On ES-I, University students score highest on A, lowest on B, and highest on (A-B). The Trade Union President-Secretary group are the reverse, lowest on A, highest on B, and lowest on (A-B). The Education Department Group, three quarters of whom do not have university degrees, come in between.

It has been suggested that the (A-B) or difference scores measure not

TABLE 3
MEAN SCORES OF THREE DIFFERENT WESTERN AUSTRALIAN GROUPS

Scale		University students	ES-I Education department	Trade union	University students	ES-II Education department
<i>A</i>	N	77	439	38	77	425
	M	5.46	5.21	5.10	3.04	2.68
	σ	.62	.66	.61	.44	.51
<i>B</i>	M	4.10	4.68	5.40	2.14	2.39
	σ	.75	.72	.78	.43	.54
<i>(A-B)</i>	M	1.35	.54	-.29	.90	.29
	σ	1.13	1.20	.91	.76	.96

only consistency of educational attitude structure, which will be discussed later, but also educational attitudes in the same way as the *A* and *B* scores do. It is noticeable, with the *W.A.* samples, as with the *U.S.* ones, that the *A* scores are the ones which tend to show least differentiation between groups. This may be because of the phenomenon of social desirability, in that some of the *A* items tend to be agreed with because they sound like the "right" beliefs to hold. For the Western Australian sample ($N = 535$) there is a high correlation between (*A-B*) scores and both *A* and *B* scores. Between (*A-B*) and *A*, it is .65 for *ES-I* and .91 for *ES-II*; between (*A-B*) and *B* it is -.84 for *ES-I* and -.92 for *ES-II*. Intercorrelations between *ES-I* and *ES-II* are fairly high, .70 for *A* scores, .71 for *B*, and .85 for (*A-B*).

The results so far considered seem consonant with two of Kerlinger's original hypothesis (*a*) that "individuals having the same or similar occupational rôles would hold similar attitudes towards a cognitive object significantly related to the rôle" and (*b*) that individuals will differ in their scores on the Progressive and Traditional factors, "such differential scores being functions of the individuals' occupational rôles, extent of knowledge of the cognitive object (which here is education) its importance to them, and their experience of it" (2). The differential scores of University students, the Education Department group, and other people who are neither, lend some support to the idea that group scores will differ as a result of occupational rôle and knowledge of education.

The suggestion that *A* and (*A-B*) scores will be higher and *B* scores lower for groups with greater knowledge of education would seem to be supported by an overall analysis of the Education Department sample. About a quarter of the persons in this sample had University degrees, so that scores could be compared for graduates and non-graduates. Table 4

shows highly significant differences for all scores on both scales. It will be noted that graduates score significantly higher on the *A* factor, significantly lower on the *B* factor, and significantly higher on (*A-B*).

TABLE 4
MEAN SCORES OF GRADUATE AND NON-GRADUATE MEMBERS OF THE
EDUCATION DEPARTMENT OF WESTERN AUSTRALIA*

Scale	ES-I			Significance of difference	ES-II		
	Degree		No degree		Degree		No degree
	N	114	325		116	309	
A	5.35(.65)	5.16(.67)	.01	2.87(.54)	2.61(.51)	.01	
B	4.32(1.02)	4.80(.86)	.01	2.22(.55)	2.46(.52)	.01	
(A-B)	1.03(1.29)	.36(1.13)	.01	.65(.96)	.15(.92)	.01	

* Figures in parentheses are standard deviations.

Among these 114 graduates were 26 who held the B.Ed. degree and who would have done at least two years' further work in Education. Analysis of these groups shows that the Education graduates tend towards higher *A* scores, lower *B* scores, and higher (*A-B*) scores. The differences are significant except for the *A* scores on ES-I and the *B* scores on ES-II, where the trend is the same as for those differences which are significant. While it is intended to repeat the work with larger samples, the general trend of results would seem to indicate that groups of persons who have made a more intensive study of education are more Progressive-Permissive in their educational attitudes.

When, however, the *specific* groups within the Education Department are considered, the picture alters and some interesting results emerge. Analysis of variance and subsequent "*t*" tests showed certain similarities and difference between the six groups, i.e., the Superintendents and Specialist Advisors, Teachers' College Lecturers, Secondary Heads, Secondary Teachers, Primary Heads, and Primary Teachers. On the basis of the statistical analysis, the six groups were combined into three new groups: (a) Superintendent and Specialist Advisors and Teachers' College Lecturers; (b) Primary and Secondary Heads and Primary Teachers (in the analysis that follows, Secondary Heads were omitted as they were all graduates), and (c) Secondary Teachers. These three new groups differ significantly on all scores except *A* on ES-I, where only the first group differs from the other two. The differences, which will not be discussed here, were that the first group scored highest on *A* and (*A-B*) and lowest on *B*, while the secondary teachers were lowest on *A* and (*A-B*) and highest on *B*.

It will be remembered that when the whole Education Department sample was divided into graduates and non-graduates, there were significant differences. Some of these disappear if we divide these three new groups into graduates and others. The 47 graduates in Group (*a*) do not differ significantly¹ from the 18 non-graduates at the .05 level except on the *B* scores for *ES-I*, where the difference is only just significant. The 24 graduate secondary school teachers of Group (*b*) do not differ from the 30 non-graduate on any of the six comparisons (*A*, *B*, and (*A-B*) for both scales). Yet when the 30 graduates, Primary Heads and Primary Teachers Group (*c*) are compared with the 274 non-graduates all differences are significant at the .01 level except the *A* scores on *ES-I*. These inconsistencies were masked in the overall analysis.

How then, can we explain the fact that among Superintendents, Specialist Advisors, and Teachers' College Lecturers, and among Secondary School Teachers, having or not having a degree makes no significant difference to scores on these educational scales, whereas among Primary School Heads and Primary School Teachers it does? The clue, it would seem, lies in the nature of the occupational rôles of these groups rather than in their knowledge of education as such, and in the group pressures exerted upon the individuals. The members of the first group are all members of the Institute of Superintendents or of one or other of the Teachers' Colleges, there is a fair amount of personal interaction, they are concerned with general educational problems and policy, with curricula and with educational theory.

It may be suggested that those members of this group who are not graduates (about a quarter) may tend to respond to the climate of opinion in which they work and take up the attitudes of the graduate members of the group. Or it may be that the non graduate members, aware of a lack of formal University study in education, have made up for this by individual reading and thinking about educational problems. The secondary teachers may be constrained by the requirements of the actual class-teaching situation and the pressures due to external examinations to take up a more traditional-restrictive rôle. Bush (1) has suggested that the social rôle of the secondary school teacher in Australia is very clearly defined. His responsibility is to teach a prescribed body of subject matter so that the pupils will be able to pass an examination, the manner in which he does this being quite definitely spelled out. Teacher-pupil relationships are characterized by social distance and formality, the hierarchical nature of secondary school relation-

¹ Behrens-Fisher tests were used.

ships reinforced by examinations and inspections which tend to preserve the status quo. Such a social rôle, Bush suggests, is clearly understood and accepted by teacher and pupil and reinforced by cultural conditions. It would seem likely then, that in order to work comfortably in secondary schools and avoid possibilities of rôle conflict, the teacher with a degree, whom we might expect from previous analysis to be more progressive and less traditional, quickly adapts to the social climate of the secondary school and learns to play his well-defined rôle.

In the primary service the picture is quite different. Teachers with degrees tend to be more progressive, less traditional, and to have more consistent attitude structures than their non-graduate colleagues. Practically all graduates will have done one year's study of Education, some considerably more. The teacher will still have an annual inspection by the superintendent, but we have seen that the supervisory group (superintendents and specialist advisors) are more progressive and less traditional than the bulk of teachers. So the graduate teacher, more used to thinking of the problems of education, more cognisant of psychological needs and of principles of child development, is less subject to the pressures which operate on his fellow in the secondary school. He is a class teacher, rather than a subject specialist; there are no external examinations by which his competence as a teacher is judged. Consequently he would seem more free to adopt a rôle more influenced by what he has learned during his University course.

Kerlinger's original *Q*-sorts were done with 10 progressive-permissive Education Professors, 8 Liberal Arts Professors, ranging from very liberal to very conservative, and 7 outside people, middling and conservative. His work on *ES-I* and *ES-II* was done with graduate and undergraduate students of education and outside people. We take it that where the occupational rôle is different (professors and outside people, or students and outside people) differential scores are mainly a function of the rôle. Where the rôle is the same (as with the professorial or with the student groups) knowledge of education, ego-involvement in it, and experience of it are important in producing different scores between groups. When, however, as in the Education Department sample, we are dealing with groups within the same occupational bracket, the position is more complex and the definition (or lack of definition) and nature of the social rôle become of overriding importance. At least this is how we explain the apparent inconsistencies detailed above.

With respect to Kerlinger's second point about difference (*A-B*) scores—that they measure consistency of educational attitude structure—it may

be noted that a high ($A-B$) score, whether positive or negative, indicates that the person is attitudinally consistent, that if he approves of one item on a scale he is likely to approve of other items on the same scale. This means he will have a relatively high ($A-B$) score, e.g., 1.00 or higher. Inconsistent persons do not make clear-cut differentiations but respond in a fashion which looks more like chance. For example, take the two items, "Children should be allowed more freedom than they usually get in the execution of learning activities" and "Children need and should have more supervision and discipline than they usually get." Consistency would require that agreement with one meant disagreement with the other. Yet often the same attitude was held towards both, and it was in this sort of case that there was a low ($A-B$) score.

Difference scores for various groups indicate that University students enrolled in Education courses, Teachers' College Lecturers and Supervisors and Specialist Advisors are more consistent in their educational attitudes than teachers without degrees, who are more consistent than outside people. Though the outside people are a small and biased sample, their scores are similar to those in the U.S. sample and indicate no very consistent position either way, being close to zero. Judging from the results of both countries, an ($A-B$) score near to zero could indicate inconsistency, little or no knowledge of educational issues and problems, or a trend towards traditionalism. People who are not members of a teaching service or students of education do not, as a rule, study and think about educational matters or behave in an educational frame of reference, so that it might be expected that they would be inconsistent in their educational thinking.

Work is at present in progress on further differences which are apparent between the Education Department groups, but one point may be mentioned here. Unpublished information supplied by the author of the scale makes no mention of sex differences. In his reported work he uses only the term "students," though it might be inferred from remarks about the outside people that they are males. Scores for each sex were kept separate for the *W.A.* sample and indicated no sex difference on either scale for A or ($A-B$) scores. Women tend to score higher than men on the B factor, the differences in each case being only just significant at the .05 level. Whether this phenomenon is peculiar to any teacher sample, or to the members of this particular one, cannot be determined, but it obviously needs further investigation. There is of course, always the possibility of a Type I error, and that there is no real sex difference.

D. SUMMARY

In this interim report, scores on Kerlinger's educational attitude scales are presented for 439 members of the Western Australian Education Department, 77 University students of Education, and 38 Trade Union presidents and secretaries. Comparisons are made between these results and Kerlinger's original U.S. data.

In Western Australia, as in the United States, these scales seem to measure two fundamental attitudes towards education which may be labelled Progressive and Traditional. Results for similar groups in the two countries are extremely close and scales show similar differences between groups with different occupational rôles. When used with a representative sampling of a complete educational system, they also show differences between groups with different rôles in the same occupation.

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OCCUPATIONAL VALUES AND MODES OF CONFORMITY: (Turku, Finland)*

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A. INTRODUCTION

The propositions of Max Weber and more recently those of David Riesman (1950, 1952), have attempted to establish causal relationships between the religious ethic, occupational pursuit, and the differential influence power of the peer group versus the parental group in the cultural socialization process. Weber held that the so-called capitalist occupational values such as individualism and initiative had been shaped by Protestantism. Riesman as individualism and initiative had been shaped by Protestantism. Riesman developed his character-type theory along these lines of thought, and subsequently introduced the dimension of industrialism. In fact, Heberle (1956) has suggested that Riesman's three categories of "'directness' are nearly identical with Max Weber's types of social orientation of social action: traditional, value rational (Riesman's 'inner-directed'), and purposive rational (zweckrational)."

Riesman's tradition-directed personality belongs to the agrarian, pre-industrial economy, the inner-directed personality appears to emerge in the industrial economy, the inner-directed personality appears to emerge in the context of an expanding, industrializing economy, while the other-directed personality type represents the highly industrialized economy of abundance. The two latter types involve a dichotomy that partially explains some of the cultural changes in the western societies after the era of Weberian explanation, that is, after capitalism has expanded and reached a given degree of economic maturity. In this dichotomy is implied an essential difference in modes of conformity. Whereas the inner-directed personality conforms to the personal ideal laid down in childhood by his parents and the older generation in general, the other-directed personality usually conforms to his peer-group. By extension, an economy of abundance and high industrialization fosters larger numbers of other-directed personalities. As industrial, educational, military, and social groups expand, they impose greater demands for loyalty and compliance among the members, and as the general wealth of the economy increases, raising the level of living, the need for pioneering,

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self-sacrifice, and hard-headed individuality loses its importance, at least from the survival point of view. In summary, we see that:

While the tradition-directed person endeavors to conform to the accepted and traditional, detailed norms of his village, the norms of the other-directed individual are selected and based on immediate environmental cues. The inner-directed person, again, conforms to personal ideals learned in the form of general principles during his more formative years. As a result, the inner-directed personality emerges as much less dependent on group life and activity for immediate social approval, whereas, in contrast, the other-directed individual's behavior is frequently colored by his pursuit of love and need for social acceptance as well as his dependence of his ideas about himself upon others. (Gaier and Littunen, 1960.)

The present investigation was initiated to test the hypothesis that the acceptance or rejection of the so-called capitalistic occupational values of individualism and self-initiative are related to the modes of conformity of inner-directedness and other-directedness.

According to Riesman's (1952) theory it should be expected, as we have here hypothesized, that self-control and self-initiative value supporting is associated with presumably inner-directed personality assessment, that is, the individualistic Character Trait emphasis. Respectively, group-control and group-initiative value should be associated with other-directed Group Behavior emphasis, for "... the heavens of achievement look quite different to the other-directed youth than to his inner-directed predecessor. The latter found security in moving to the periphery of the various frontiers and establishing an isolated and recognizable claim on a new piece of territory—if he founded a firm, this was his lengthened shadow. Today the man is the shadow of the firm. Such long-term aims as exist are built into the firm, the institution."

While this general hypothesis is basic to Riesman's theory, little empirical evidence has been reported to substantiate this speculation. It is the purpose here to compare the supporters and rejectors of these values associated with personality orientation with respect to the extent each value position in a given cultural context facilitates *perceived success* in these modes of conformity.

B. METHOD

1. Procedure and Subjects

Perceived success in inner-directed versus other-directed conformity was measured by employing Riesman's original questions (1952) modified by Gaier and Wambach (1960) and extended by the present writers. The

present data consist of responses given by a simple, systematic sample of 271 subjects drawn from the population of Turku, the second largest city in Finland (total population is slightly in excess of 100,000). The sample, obtained from the census lists, ranged in age between 20 and 65.

Turku is in many respects representative of the general characteristics of the expanding, urban sub-culture in Finland, which, at present, is in the middle of a rapid industrial development.

During 1950 to 1955, while industrial production in Finland increased about 49 per cent, the increase in the United States was but 23 per cent. During the first half of the 20th century, the percentage of urban population has increased from 12.5 to 32.3 per cent, thus making Finland a relatively non-urbanized society. This kind of economy is thought to mold and/or create a personality type of inner-directedness. In fact, Riesman has suggested that the countries of the Protestant, northern Europe, are primarily inner-directed in their socialization orientation. The earlier comparison of Finnish and Southern White and Negro American university students (Gaier and Littunen, 1960) pointed in this direction. Also, in terms of Riesman's typology of inner versus other-directed personality assessment, the data suggested that Finland, as a whole, is ecologically not extremely heterogeneous.¹

The subjects were asked to list three each of what they considered their greatest personality assets and greatest personality liabilities. The results reported here are based on a total of 381 statements of assets and 348 statements of liabilities (total statements = 729).

The indices of the two so-called capitalistic occupational values of individualism and self-initiative employed here were partly based on items employed by Rosenberg (1957) in his investigation of dimensions of occupational value.²

The individualism index was designed to measure the respondents' preferences in their occupational rôle among a dimension that involved self-control

¹ Thus far, distributions of personality assets and liabilities have been gathered from (a) a population of students in Finnish universities (Gaier and Littunen, 1959), (b) a rural community in Southern Finland, Loppi commune, and (c) the present sample interviewed in Turku. The comparison of the over-all distributions of the assets and liabilities revealed no significant differences between Groups B and C. Group A yielded a higher *Achievement* asset proportion than the other two groups. But this difference appears to be a social class difference rather than an ecological one. *Group Behavior* did not differ significantly among any of the three samples.

² Rosenberg used his items with students who completed the questionnaires in class whereas our data were collected in personal interviews among a selected urban population, necessitating changes in the present design. Actually, Rosenberg's items served only as a basis for our item design.

versus group-control, independence of supervision versus submission to supervision. The self-initiative index purported to assess the respondent's preferences to initiate and plan his own work versus having it planned for him. These items were presented in the form of forced choice interview questions with a short introduction referring to the typical work situations and asking the interviewees to indicate how important the requirement characterized by each situation would be in their selection of a job.

An example of the items in the self-control index was "Is the following requirement for a job in your opinion not very important, somewhat important, very important, or absolutely essential: 'Freedom of supervision by others.'"

An example of the items in the self-initiative index is "Is the following requirement for a job in your opinion not very important, somewhat important, very important, or absolutely essential: 'An opportunity to use my special abilities or aptitudes.'"

According to our general hypothesis, the individualistic value position on our self-control versus group-control index should be associated with the inner-directed conformity. This should be manifested by the emphasis on *Character Trait* in the personality assets and liabilities listed by the subjects. The non-individualistic value position on this index should be associated with other-directed conformity on *Group Behavior* emphasis in the personality assets and liabilities. A parallel relationship will be tested with the self-control versus group-control index as the causal variable.

2. Classification of the Data

To test the hypothesis concerning perceived success in terms of the inner-directed versus other-directed conformity, the 381 obtained personality assets were classified into three major categories: *Group Behavior*, *Character Traits*, and *Achievement*.³ Typical responses contained in these categories were:

- | | |
|-----------------------|------------------------------|
| I. Group Behavior: | "Friendliness" |
| II. Character Traits: | "Willingness to help others" |
| | "Honesty" |
| III. Achievement: | "Careful with money" |
| | "(I am) a good housewife" |
| | "Able to concentrate" |

A response listed as an asset that expressed the respondent's satisfaction

³ See Gaier and Wambach for a more detailed description of the classification system.

about his ability to get along with others, was interpreted as an indicator of his perceived success in conforming to the group, that is, an other-directed orientation. When the subject listed the statement, "Inability to get along with other people" as a liability, it may be presumed that he perceives himself as a failure in this mode of conformity.

The 348 obtained personal liabilities were classified into three major categories: *Group Behavior*, *Character Traits*, and *Personal*. Responses typical of each category were:

- | | |
|-----------------------|------------------------------|
| I. Group Behavior: | "Not easy to make friends" |
| | "Adverse to visiting people" |
| II. Character Traits: | "Slow to forgive" |
| | "Fed up with work" |
| III. Personal: | "Nervousness" |
| | "Biting my nails" |

Because the obtained responses were categorized into three basic groups: *Group Behavior*, *Character Traits*, and *Achievement*, (the latter group being labeled *Personal* in the liabilities breakdown), it was also possible to observe success versus failure dimension in the inner-directed mode of conformity, assuming that the category, "*Character Traits*," reflects a system of personal ideals, or, in Riesman's terms, the "built in gyroscope."

C. RESULTS AND DISCUSSION

The per cent breakdown of personality assets listed among supporters of self-control and group-control and the per cent breakdown of personality assets among self-initiative and group-initiative value supporters are presented in Tables 1 and 3, respectively. A test of chi-square applied to Tables 1 and 3 did not yield statistical significance.

TABLE 1
PER CENT BREAKDOWN OF PERSONALITY ASSETS AMONG SELF-CONTROL VS.
GROUP-CONTROL VALUE SUPPORTERS*

Asset category	Value score				
	1	2	3	4	5 (Group-control)
		(Self-control)			
I. Group behavior	30	27	29	28	29
II. Character traits	58	59	56	63	61
III. Achievement	12	14	15	9	10
	100	100	100	100	100
	N = (36)	(44)	(159)	(54)	(52)

* Not significant. ($X^2 = 2.48$, $df = 6$), two last columns combined.

TABLE 2
PER CENT BREAKDOWN OF PERSONALITY LIABILITIES AMONG SELF-CONTROL
VS. GROUP-CONTROL VALUE SUPPORTERS*

Liability category	Value score				
	1 (Self-control)	2	3	4 (Group-control)	5
I. Group behavior	29	15	18	14	9
II. Character traits	45	58	53	59	59
III. Personal	36	27	29	27	32
	100	100	100	100	100
	N = (35)	(52)	(171)	(44)	(46)

* $X^2 = 5.49$, $df = 1$, extreme columns and Categories I and II, significant at the .025 level.

That no significant differences were obtained poses a basic dilemma here, especially in view of our original hypothesis: this finding, apparently not in accordance with Riesman's propositions, might lead one to speculate that success experience, in terms of personality assets, may or may not be possible in a given cultural context. For the normative goal could be so high in a given milieu that self-perceived performance would remain more or less stable under varied conditions. This result might indicate the heightened guilt of the inner-directed personality in an economically expanding, pioneering culture where duty and old-fashioned virtues are presumably stressed. For no matter how strongly one subscribed to the key values of the inner-directed personality ideal, it is possible that this individual never feels or experiences differential satisfactions or assets, but only in his guilt or liabilities.

The per cent breakdown of personality liabilities and self-control versus

TABLE 3
PER CENT BREAKDOWN OF PERSONALITY ASSETS AMONG SELF-INITIATIVE
VS. GROUP-INITIATIVE VALUE SUPPORTERS*

Asset category	Value score			
	1 (Self-initiative)	2	3 (Group-initiative)	4
I. Group behavior	30	26	32	26
II. Character traits	56	59	58	61
III. Achievement	14	15	10	13
	100	100	100	100
	N = (106)	(133)	(111)	(31)

* Not significant. ($X^2 = 1.35$, $df = 4$), two right columns combined.

group-control is presented in Table 2, while the per cent breakdown among self-initiated versus group-initiated value supporters is contained in Table 4.

TABLE 4
PER CENT BREAKDOWN OF PERSONALITY LIABILITIES AMONG SELF-INITIATIVE
VS. GROUP-INITIATIVE VALUE SUPPORTERS*

Liability category	Value score			
	1 (Self- initiative)	2	3 (Group- initiative)	4
I. Group behavior	20	19	12	10
II. Character traits	52	52	68	67
III. Personal	28	29	30	23
	100	100	100	100
	N = (103)	(121)	(94)	(30)

* $X^2 = 4.30$, $df = 1$, Categories I and II with columns dichotomized; significant at the .05 level.

Using tests of Chi-squared, significant values were found between liabilities and self-control versus group-control ($X^2 = 5.49$, $df = 1$), and liabilities and self-initiative versus group initiative ($X^2 = 4.38$, $df = 1$), appearing to corroborate the above explanation.

The earlier, empirical work of Postman, Bruner, and McGinnies (1948) revealed a general psychological defense mechanism that appears to parallel the presumably guilt-based personality assessment among the present population. This defense mechanism, called *perceptual defense* by Postman and his co-workers, serves as a point of departure in the interpretation of both the zero-order correlations in Tables 1 and 3, and the significant correlations in Tables 2 and 4. The relation between value orientation and perceptual selectivity is generally two-fold: perceptual sensitization to valued stimuli and repression or perceptual defense against inimical stimuli. Here, no perceptual sensitization takes place (Tables 1 and 3), presumably because, although these "self-stimuli" are valued, no satisfaction or reward is experienced. With the explanation of guilt, repression or perceptual defense of the failure side is more important. For example, the self-control ideal supporter might lose his ego-respect if he were to recognize and admit failures in this behavioral area. Hence, he may tend to repress his inner-directed (character trait) liabilities as the results in Table 2 suggest. It is also possible that the group-control ideal in this cultural context leads to the repression of group behavior failures, thereby helping the individual to maintain his outer control and save "face." If these failures could not be repressed, the conflict between values and success in living up to these values

might predispose a number of traits leading to personality disintegration. Also, this may be the very mechanism that facilitates the hypocritical person's continuous psychological survival, and his survival of "false" value orientation.

The concept of perceptual defense should be especially meaningful in cultures like Finland,⁴ where socialization is presumably parent-centered and the inner-directed personality relatively prevalent. In this kind of cultural setting, where parents exert strong pressures in socialization and the child-training is authoritarian, the individual may tend to strive anxiously toward the inner-directed personality ideal, toward the old-fashioned character strength (Category II among the Personality Assets). On the other hand, the inner-directed personality is expected to gain ideological independence (even from his parents) quite early, that is, to learn to place his trust in his built-in "gyroscope" rather than in his "radar," to use Riesman's analogy. This dual pressure is conflict inducing: first, the inner-directed socialization is authoritarian, parent-centered. But then the child is expected to become independent quite early of both his parents and other adults. Together with strong character strength expectations, this norm pressure for self-initiative and self-control should exert rather severe stress on personality integration. But: how does this inner-directed personality manage such stress? The interpretation of the present results (Tables 2 and 4) would also here be in line with the perceptual defense hypothesis. The person who strongly subscribes to the inner-directed ideal of self-initiative or self-control, tends to repress possible failures in living up to this ideal. Hence, self-initiative or self-control supporters show less failures and liabilities (*Character Traits*) than do others. Postman and his colleagues especially mention that the perceptual defense is similar to the mechanism of repression. That this really is repression of failure rather than relief earned by success is indicated by the fact that self-control or self-initiative supporters show no triumph of success in the Assets listed. Assets are more or less stable regardless of the basic value position in this respect. There is nothing to be proud of in either direction.

The results from an earlier investigation comparing Finnish and American university students, indicated that the inner-directed socialization is relatively typical in the Finnish context. Other data are also in accord with

⁴ This is not to imply that repression or perceptual defense would be typical in all personality or value areas in the Finnish culture. Besides, it is possible that cultural demands elsewhere made it necessary to resort to other kinds of repression mechanisms in order to maintain self-integration.

the assumptions made here concerning Finnish child-rearing practices. Takala and Takala (1957) observed that "the attitudes of Finnish parents tend to be authoritarian but the restrictions are not severe. Both parents and children sometimes give vent to their aggressive feelings. School discipline is as traditional as in other countries in northern and central Europe. Outside school, the children learn rather early to be independent of their parents and other adults. The attitude of a great many parents is authoritarian, but somewhat casual." Takala and Takala compared American and Finnish children on responses on the Rosenzweig *P-F* test. The reported findings of their cross-cultural comparison are in accordance with the argument set forth here: namely, that American parents are less authoritarian in their child rearing and allow a more spontaneous expression for their children as compared with Finnish parents. On the other hand, Finnish parents seem to allow aggression every now and then as an outburst.

Although Takala and Takala do not refer to the Riesman dichotomy of inner versus other-directed mode of socialization and conformity, their results are more or less in line with this dichotomy, assuming that other-directed type is more general on the American scene than in Finland. The combination of *authoritarian* and at the same time *independence-encouraging* child rearing patterns in Finland is just what appears necessary in the development of the "gyroscope" system. Strong parental pressure or authoritarianism implants the general life-orientation in. And pressure for independence or early self-control converts the mode of conformity to inner-direction. It is recognized that the differences between American sub-cultures appear sometimes greater than differences between the American and Finnish groups as reported by Takala and Takala (1957), in that parental pressures vary greatly among social classes, among educational levels, as well as among other components of social structure. Such findings probably imply respective differences in modes of conformity. These problems have not been studied, but combined with broad cross-cultural comparisons, research in this context should prove fruitful.

A crucial point in further research probably is that parent orientation does not necessarily lead to self-initiative or self-control inspired decisions in every field of behavior. For example, in examining the occupational choice of Finnish university students (Littunen, 1956), the "inner-directed" parent orientation appeared to result in relatively weak striving toward financial independence during the college years. Thus, the students who mentioned that their choice of occupation had been mostly influenced by parents were significantly more often among those who studied at their

parents' expense. Students who had been influenced by peers, on the other hand, were relatively often working their way through the university.

D. SUMMARY AND CONCLUSIONS

In an attempt to test the hypothesis that the acceptance or rejection of the so-called capitalistic occupational values of individualism and self-initiative are related to the modes of conformity of inner-direction and other-direction pointed out by Riesman (1950), a sample of 271 subjects drawn from the city of Turku, Finland, was asked to list three each of what they considered their greatest personality assets and greatest personality liabilities. The obtained 729 statements were classified into areas of *Group Behavior*, *Character Traits*, and *Achievement* (the latter group being labeled *Personal* in the liabilities breakdown). In addition, an index of the so-called capitalistic occupational values of individualism and self-initiative based on items employed by Rosenberg (1957) was obtained. Tests of chi-square were applied to the obtained percent breakdown of personality assets, personality liabilities, self-control versus group-control value supporters, and self-initiative versus group-initiative values.

No significance was obtained between personality assets and self-initiative and group-initiative value supporters, nor between the personality assets and self-control and group-control values. That no significance was obtained among these dimensions was interpreted as a reflection of guilt wherein differential satisfactions and assets are not experienced as favorable, or admitted as such. This interpretation was substantiated by the significant relationships found among the liabilities listed, and the self-control group-control and self-initiative and group-initiative dimensions. The hypothesis of perceptual defense was posited to support these results: in a culture like Finland where socialization is presumably parent-centered and the inner-directed personality relatively prevalent, where parents exert strong pressures in socialization and the child-training is authoritarian, the individual may tend to strive toward the inner-directed personality ideal, toward the old-fashioned character strength ideals included in the category of personality assets defined here. The person who strongly subscribed to the inner-directed ideal of self-initiative or self-control tends to repress possible failures in living up to the cultural ideal. The data are discussed in terms of studies reporting supporting findings within the Finnish cultural setting.

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SELF-EVALUATION OF PERSONALITY ASSETS AND LIABILITIES OF SOUTHERN WHITE AND NEGRO STUDENTS*

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A. INTRODUCTION

That the cultural and social determinants for the behavior of Whites and Negroes in the southern social context differ widely has been well documented (1, 2, 3, 4, 6, 7). Davis, Gardner, and Gardner (4) concluded that Deep South Negroes must acquire a compliant personality in their dealings with Whites. Powdermaker (7) further suggests that the special cultural conditions surrounding the Negro have forced him to channel his adaptive behavior in a fashion similar to that of a masochist. This, she maintains, has provided the Negro a way of appeasing his guilt feelings over his aggressive impulses, as well as a *modus vivendi* for adapting to the difficult cultural situation imposed on him.

Dai (1) has conceptualized the problems of personality development among Negro children to be of two major types. The first type appears to "consist of problems that seem to be inherent in the primary group situation in the culture, and, therefore, they are shared in common by both Negroes and Whites." These difficulties appear to stem from inter-personal relationships between child and parents, siblings, and relatives. The other kind of problem is more or less peculiar to Negro children because of the insecure position occupied by their elders and the special cultural emphasis this social position entails.

The present study was initiated to assess the differences in the self-evaluation of personality assets and liabilities of southern White and Negro students. Specifically, we were concerned with examining the behavioral and personality facets considered most positive and most negative by racially different college students which might reflect differing social determinants.

B. SUBJECTS AND PROCEDURE

Two hundred twenty-three White and 221 Negro male and female undergraduates enrolled in two southern state universities were asked to list three

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each of what they considered their greatest personality assets and greatest personality liabilities. The total sample of 444 was composed of 66 White males (*WM*), 157 White Females (*WF*), 75 Negro males (*NM*), and 146 Negro females (*NF*), ranging in age from 18 to 24.

This unstructured questionnaire, adapted from Reisman (9), was administered by the senior author to the White subjects who were enrolled in classes in Educational Psychology. In order to avoid any of the postulated "compliance factor" described by Davis, Gardner, and Gardner (4), in relation to Negro and White behavior, the questionnaire was administered by Negro professors to the Negro subjects enrolled in their classes in Educational Psychology.

C. RESULTS AND DISCUSSION

1. Assets

The 1,332 listed personality assets were grouped into three major areas: *Group Behavior*, *Character Traits*, and *Achievement*. The category labeled *Group Behavior* included the subcategories of "Getting along with others," "Adjusting to the environment," "Concern for people," and "Friendships." Typical of the responses listed in each of these four subcategories were:

- a. Getting along with others:
 - "I am easy to get along with."
 - "I know how to get along with any group of people."
- b. Adjusting to the environment:
 - "I am adaptable."
 - "I can fit into any social group without any trouble."
- c. Concern for people:
 - "I am always willing to help others."
 - "I listen to other people's troubles and try to help them."
- d. Friendships:
 - "I can make friends easily."
 - "I am friendly to everyone."

The category of positive *Character Traits*, generally speaking, included responses generally associated with the "old-fashioned" virtues. Typical of the responses obtained in the two subcategories were:

- a. Striving:
 - "I always do my best."
- b. Character Strength:
 - "I try to reach my goals."
 - "I can make decisions and stick to them."
 - "I am honest and dependable."

The area of *Achievement* was broken down into four subcategories, each containing the following typical responses:

- | | |
|---------------------|---|
| a. Intellectual: | "I can use my head well." |
| | "I have a good deal of knowledge about a number of things." |
| b. Physical: | "I am good at sports." |
| | "I am neat and well-dressed." |
| c. Self-Confidence: | "I feel able to compete with others." |
| | "I am at ease most of the time." |
| d. Miscellaneous: | "I have a good war record." |
| | "I come from an old southern family." |

A test of Chi-Squared, applied to the total percentages obtained for the three major categories for the four groups was significant at beyond the one per cent level ($X^2 = 17.82, 6df$), as shown in Table 1. Further analysis

TABLE 1
PER CENT BREAKDOWN OF PERSONALITY ASSETS

Category	White male (<i>N</i> = 66)	White female (<i>N</i> = 157)	Negro male (<i>N</i> = 75)	Negro female (<i>N</i> = 146)
<i>I. Group behavior</i>				
a. Getting along with others	17	23	36	22
b. Adjusting to the environment	8	12	4	12
c. Concern for people	12	15	17	13
d. Friendships	9	21	12	21
Sub-total	46	71	69	68
<i>II. Character traits</i>				
a. Striving	2	1	5	—
b. Character strength	25	15	10	17
Sub-total	27	16	15	17
<i>III. Achievement</i>				
a. Intellectual	13	10	2	7
b. Physical	7	2	8	5
c. Self-Confidence	5	—	3	2
d. Miscellaneous	2	1	3	1
Sub-total	27	13	16	15

Sub-Totals: $X^2 = 17.82, 6 df$
 $P < .01.$

revealed that the *WM* group differed significantly from the other groups, but comparisons of percentage differences for the *WF*, *NM*, and *NF* did not yield significant differences. The *WM* responses were lower on *Group Behavior*, and higher on both *Character Traits* and *Achievement Factors* than all other groups. A comparison of subcategories indicated that *NM* have a similar pattern to *WM* in the *Group Behavior* category, both being

relatively high on "Getting along with others" and "Concern for people," while relatively low on "Adjusting to the environment" and "Friendships" when compared with both groups of women. In reference to *Character Traits*, both groups of men were higher in "Striving" than the women, although the percentages obtained here, based on but a few responses, are less reliable than the total category percentages. In the *Achievement* domain, *WM* are highest, and both White groups are highest in their concern with "Intellectual" attainment.

That no differences emerged between the Negro male and female groups on any of the characteristics listed may point to the cultural uniformity in dealing with the majority group. But differences were found between the total White and total Negro groups in traits directed toward the self. Both *NM* and *NF* differed significantly from the *WF* group in that their totals for the "social" category included greater emphasis on "concern for others" and less emphasis either on getting along with others and adjusting to the environment.

The expected sex differences were found only for the White group, where women were relatively higher than the men for group behavior and lower for "Character traits" and "Achievement." This is consistent with the generally accepted hypothesis that women in the southern milieu are more oriented to social interaction and less to achievement goals.

The fact that these data do not yield significant differences for the Negro group is interesting, especially in that both Negro men and women both resemble the White female distribution of responses rather than the White male distribution. It is possible that the Negro male in the southern cultural context is more oriented to the White social structure than is commonly believed, and his low "achievement" responses may reflect his lack of opportunity to exercise this. Furthermore, it may be argued that the inability to assert the achievement motif leads to greater compliance, especially among those who attend college. This compliance represents a feminine type of adjustment in a white world considerably more than a masculine type of adjustment as commonly viewed.

2. Liabilities

The 1,311 listed personality liabilities, (21 were rejected as unclassifiable or incomplete), were classified into three major groups: *Group Behavior*, *Character Traits*, and *Personal*. The category labeled *Group Behavior* had a further breakdown of two areas, "Fear of Social Situations," and "In-

ability to make friends." Representative of the responses contained here, which specifically mentioned group behavior and situations, were as follows:

- a. Fear of social situations: "I am afraid to be with a strange group of people."
"I don't know how to behave with people."
- b. Inability to make friends: "I am shy and find it hard to get to know others."
"I can't make friends in groups as I would like to."

Included in the category, *Character Traits*, were the following:

- a. Selfishness: "I am too selfish."
"I am too concerned with my own affairs."
- b. Bad Temper: "I blow up too easily."
"I get mad very quickly."
- c. Impatience: "I need to develop patience."
"I get impatient even with people I love."
- d. Conceit and arrogance: "I brag too much."
"My friends say that 'I am too stuck up'."
- e. Frivolity: "I have fun when I should be working."
"I don't take things seriously."
- f. General Character Weakness: "I gossip too much."
"I am disorderly."

The category labeled, *Personal*, reflects a pervasive feeling of personal inadequacy rather than just being limited to the area of interaction or in specific traits considered unrewarding in the culture. Examples within each subcategory follow:

- a. Intellectual inadequacy: "I can't think fast enough."
"I just don't have enough brain-power."
- b. Physical inadequacy: "I am too fat."
"I am too tall to get dates."
- c. Independence: "I like my freedom too much for my own good."
"My friends say I want my own way too much."

- d. Lack of Confidence: "I just don't have any confidence in myself."
- e. Anxiety: "I have an inferiority complex."
"I worry all the time about nothing."
- f. Moodiness: "I get in a stew about little things."
"I have spells of the blues."
- g. Financial difficulties: "I get depressed often."
"I need more money to be the person I would like to be."
"My trouble is lack of money."

As indicated above, a total of 21 responses were not classifiable. These included statements like "I hate all women" (by a woman), "I am a radical," "I can walk through a group of boys," and "I am losing my accent."

A Chi-Squared test of significance applied to the percentage breakdown of the liabilities shown in Table 2 for the four groups did not reveal any

TABLE 2
PER CENT BREAKDOWN OF PERSONALITY LIABILITIES

Category	White male (N = 66)	White female (N = 157)	Negro male (N = 75)	Negro female (N = 146)
<i>I. Group behavior</i>				
a. Fear of social situations	13	11	6	6
b. Inability to make friends	5	8	12	5
Sub-total	18	19	18	11
<i>II. Character traits</i>				
a. Selfishness	7	5	8	4
b. Bad temper	5	7	10	23
c. Impatience	7	7	3	6
d. Conceit and Arrogance	10	4	9	3
e. Frivolity	1	1	3	3
f. General character weakness	9	15	2	3
Sub-total	39	39	35	42
<i>III. Personal</i>				
a. Intellectual inadequacy	7	2	7	8
b. Physical inadequacy	2	3	7	3
c. Independence	4	4	4	3
d. Lack of confidence	18	23	13	15
e. Anxiety	9	6	6	8
f. Moodiness	3	4	2	10
g. Financial difficulties	—	—	8	—
Sub-total	43	42	47	47

Sub-Totals: $X^2 = 3.57$, 6 df
Not significant.

significant differences ($X^2 = 3.57$, 6 df). No tests of significance of the sub-categories were made as the cell percentages were too small. Inspection of Table 2, however, reveals that *WF*, *WM*, and *NF* all had the highest per cent responses in the "Lack of confidence" area, while *NF* was highest in "Bad Temper." Negro men were also high in this direction, and were the only subjects to mention financial difficulties as a personality liability (eight per cent of their responses). In addition, both male groups had higher percentages for the responses classified as "Conceit and Arrogance" than did either of the women's groups.

3. Trend Comparisons

With respect to the differing cultural rôles of male and female, sex differences were found only in responses to the listed assets. And there, only the White group differed. Among the multiplicity of contributing factors may be noted that the more compliant social personality expected for females is produced, by very differing factors, of course—in Negro men as well. In other words, Negro men in the south may be expected to take on the rôle of being more feminine as a form of self-protection by obeying, not taking the initiative, and accepting—surface-wise, at least—the decisions made for them by the *critical others* in their surroundings. It may also be that the college status of our subjects was too similar, and that a more culturally representative sample would have yielded more sex rôle differentiation.

Perhaps more surprising than the failure to obtain significant sex differences in this sample is the lack of differences between Negro and White groups as a whole. These differences undoubtedly exist, but the form of the questionnaire and/or similarity in educational background may have clouded these differences. But our findings are in line with Myrdal's (6) astute observation when he wrote that the:

. . . Important thing is that the Negro Lower Class, especially in the rural south, have built up a type of family organization conducive to social health, even though the practices are outside the American tradition. *When these practices are brought into closer contact with white norms, as occurs when Negroes go to the cities, they tend to break down partially and to cause the demoralization of some people.*¹

It was mentioned earlier that the procedure employed here was also employed by Reisman (8) in assessing the orientation of his subjects according to his inner and other-directed personality hypotheses. In line with Reisman's findings, the southern culture should emphasize the inner direction with its

¹ Italics is ours.

concern for self-oriented achievement. The Negro population in the present investigation represent a selected sample of the southern total Negro group, in that a very small per cent of southern Negroes attend college. It should follow, therefore, that Negroes attending college in the south would have a higher "achievement" motive than those not seeking mobility through education. They would be orienting themselves to belong to the small Negro middle class, with the consequent manifestations of more inner direction. Our study was not designed to test Reisman's hypothesis of inner vs. other direction, and failure to obtain support for this inner-directedness in our group does not invalidate his conclusions. But our conclusion does focus the need to account for the perceptual differences within the culture.

D. SUMMARY AND CONCLUSIONS

In order to assess the direction of differences in self-evaluation of personality assets and liabilities of Southern White and Negro college students, 223 White and 221 Negro undergraduates (total $N = 444$) enrolled in two southern state universities listed three each of what they considered their greatest personality assets and liabilities. The listed assets were grouped into three areas dealing with Group Behavior, Character Traits, and Achievement. The liabilities listed were categorized into Group Behavior, Character Traits, and Personal inadequacies. Per cent responses were computed for each of the categories, and tests of Chi-Square were applied. On the basis of the obtained results, the following conclusions appear warranted:

1. White males showed significantly fewer socially oriented responses than both white females and Negro males and females in the assets listed.
2. Socially oriented responses were listed significantly more often than character or achievement oriented responses for all groups, though significantly less frequently for the White males.
3. No significant differences in responses to the liabilities listed were found among the four groups.
4. Socially oriented responses for all groups were listed significantly more often as assets than as liabilities.
5. Southern Negro males resemble their own female group more than White males resemble their female group in the categories examined here.
6. Negro males showed significantly fewer "achievement" responses than his White counterpart, but the general profile of categories shows great similarity to both White and Negro women.

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INDIVIDUAL PREDISPOSITIONS AND EXTERNAL PRESSURES: A NOTE ON DETERMINANTS OF ATTITUDES*¹

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A. INTRODUCTION

The path which researchers must travel in order to realize the goals of science is neither straightforward nor easy. Apparently unquestionable empirical findings may result from the operation of extrinsic variables not taken into account by the methodology of the researcher. Presumably unimpeachable conclusions may be based upon hypotheses making doubtful implicit assumptions. A seeming example of research requiring close scrutiny on both counts is provided by Libo in his article on the lack of relationship between authoritarianism and attitudes toward socialized medicine among medical students (5). The present paper will deal with three distinct but related problems. First, certain logically implicit and empirically unjustifiable assumptions underlying Libo's general hypothesis will be made explicit. Then results differing from his and incompatible with his conclusions will be presented. And finally, an attempt will be made to locate specific methodological artifacts in Libo's research which may have led to the results he reports.

Mahler, using a scale of favorable attitudes toward socialized medicine which he devised, reported a correlation of $-.30$ between scores on his measure and scores on the California *F* scale among a sample of Stanford undergraduates (6). Accepting Mahler's finding as valid, Libo questioned "whether such a relationship exists in a group whose attitudes toward socialized medicine might be formed as part of an articulate institutionally-defined ideology," or as a result of the future "status, autonomy, and fi-

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² The writer is indebted to Professor Richard Christie for his many invaluable suggestions.

nancial needs" being involved in the issue, "rather than on the basis only of a general and more personal pattern of values?" (5, p. 133). The problem might be phrased more succinctly: Does a general relationship between personality organization and attitudes disappear when other determinants of the attitude, such as group pressures and individual self-interest, are brought into play? Medical students can indubitably be considered a group in which these extra-personality determinants of attitudes toward socialized medicine are operating, and to answer his question, Libo administered both the *F* scale and Mahler's scale to the senior class at the University of Maryland Medical School and found a correlation of but $-.02$ between the two instruments. This result, Libo concluded, is "in line with the hypothesis that correlations between personality traits and social attitudes are more easily found in populations where the social attitude is not a salient part of the group's ideology and hence can be allowed to vary in accordance with the individual's broader personal value system . . . When, on the other hand, a social issue is defined as part of an articulate institutional ideology with which the individual is attempting to identify, its relation to a general pattern of personal values need not be expected."

This particular hypothesis, although it is seemingly plausible at first sight, demands close scrutiny. The implicit assumption which is made and which is required if the hypothesis is to be valid can be summarized as follows. The institutional pressures to which the individual is subject are so great, and the institutional value system is so significant to him, that all other considerations become inconsequential. Among medical students, therefore, attitudes toward socialized medicine are pressed into such a homogeneous mold that, despite their assumed previous relation to personality characteristics, any association between the two vanishes. However, for such a uniform distribution to develop, either the institutional pressures exerted or the degree of identification made with the institutional value system have to be directly proportional to the intensity with which favorable attitudes toward socialized medicine are held. If the pressures to which the individuals are subject, or if the degree of identification made, are equivalent for all the members of the group, then whatever changes in attitude take place should be the same for each individual. But if all the individuals exhibit an equal amount of change in the same direction, then the previous ordering of the individuals in terms of favorableness of attitude should persist; and if the rank order of individuals along this dimension remains the same, then the relationship between attitude and personality should be found.³ Indeed, since extreme-

³ Since social psychologists, particularly those dealing with the relation of person-

ness of attitude and the intensity with which it is held are positively correlated, those most favorable should show the least amount of change in the direction of the institutional norm.⁴

Are there, however, differential rates of identification and pressure? If an individual maintains his favorable attitudes toward socialized medicine with any degree of conviction, his adoption of an incompatible value system should lead to severe psychological conflict. Since individuals tend to avoid conflict-producing situations, we may reasonably expect that those individuals most favorable to socialized medicine will be least likely to adopt the institutional value system, much less adopt it to a greater extent than those individuals unfavorably disposed toward socialized medicine. On the other hand, small group research has presented evidence indicating that up to a point groups do exert pressure upon an individual proportional to the amount of deviance he exhibits (4, p. 196). But whether this is also true of larger institutions, where there exists both a variety of membership groups⁵ and a more variegated value system, still remains to be determined by additional empirical investigation. Further, since we are here dealing with the relation of personality traits to attitudes, in which consequently the latter are functional for the individual, the question arises as to whether most institutions can exert pressure sufficient to effect a complete reversal of attitudes once they have been adopted. Even in the extreme case, where the institution is determined to prevail, is willing to bring into play all the resources at its command, and where the individual cannot leave, the available evidence would seem to show that successful resistance is possible (2).

ality to values, are interested in studying the effects of social subsystems upon these variables, the fact that these subsystems may have norms highly relevant to the expression of certain values, argues for the use of instruments which allow for as wide a dispersion of scores as is feasible. The more limited the range of scores, the more likely is the existence of norms to cause a bunching up of measures, which in turn would vitiate the determination of the existence of any relationship between variables.

⁴ Is it not possible for those individuals who already subscribe to the institutional value system to show no change in the relevant attitudes? If the attitudes are held with great intensity, entrance into a favorable environment will certainly reinforce the individual's beliefs, but unless the norms of the institution are even more extreme than the attitudes of such an individual, he should feel no pressure to change. Thus, instead of the previous rank order persisting, there should be a squeezing together of the previous middle group with the previous extreme group. Thus instead of there developing a uniform distribution, there should arise a dichotomous one. Whether attitudes which are reinforced do not become even more extreme, and whether previously moderate attitudes can become very extreme, is an empirical problem, any solution of which is, as far as I know, still unknown. Some relevant data will be analyzed further on.

⁵ William L. Nicholls II of the Bureau of Applied Social Research has made available to the author evidence indicating that in medical school selective membership

Although we have thus far dealt solely with the effect of the institution upon the individual, there is another factor which must be taken into account, namely the effect upon attitudes of the individual's needs and self-interest. With this determinant of attitudes, Libo does not deal, mentioning it only in passing, evidently assuming that it is but another aspect of the institutional value system. However, if a valid analysis is to be arrived at, this particular element must be taken explicitly into account. Much of what has been said before also applies to this point. If the results which Libo expects are to be found, the strength of the needs which he considers significant—status and autonomy (or undisputed control of the physician-patient relationship)—must be inversely related to degree of favorableness toward socialized medicine. If low scorers on the *F* scale are less motivated toward these goals than high scorers, the relationship between the two variables should be strengthened; if no difference exists, then the previous argument on constancy of pressures and identification applies; only if low scorers are striving more for these particular goals, will the relationship between authoritarianism and favorable attitudes toward socialized medicine be vitiated. Prior research makes the assumption of the third alternative untenable: authoritarians appear to be more oriented toward the achievement of status and the opportunity to dominate than non-authoritarians (1, pp. 382 ff.; 7).

Theoretical expectations lead us to believe, therefore, that a general relationship between personality characteristics and a particular social attitude will persist even in groups characterized by the operation within them of extrinsic factors such as group values and self-interest. Hence, we should expect to find a negative correlation between *F* scale scores and favorable attitudes toward socialized medicine among medical students.

B. METHOD

As part of an ongoing study of medical education conducted by the Bureau of Applied Social Research at Columbia University, four classes of medical students—the senior classes at two eastern medical schools and the junior and senior classes at a midwestern one—answered a questionnaire prepared by the Bureau. The students had been administered similar questionnaires during their freshman, sophomore, and junior years, being assured each time of complete anonymity.

groups may help individuals withstand institutional pressures. In his analysis of sociometric data from one of the medical schools in our samples he has discovered that attitudes toward socialized medicine is the most important attitudinal correlate of friendship choices.

Included in the questionnaire was a 20-item version of the California *F* scale devised by Christie, *et al.* (3). The particular version used was designed to eliminate biases introduced by response set and is composed of 10 original *F* scale items and reversals of 10 others. The range of possible scores is from 20-140, the higher the score the greater the degree of authoritarianism. In addition, all four classes were asked the following question:

Which of these alternatives comes closest to describing the way you feel medical care and health insurance for the people in this country should be handled?

1. An arrangement in which the medical profession, with financial aid from the government, would administer medical care for everybody.
2. An arrangement in which the medical profession, on the basis of increased private medical insurance, would administer medical care for those who are interested.
3. A continuation of present arrangements.

Although this question is not equivalent to Mahler's scale, it taps approximately the same dimension. The students agreeing with Alternative 1 were classed as those most favorable to socialized medicine, those agreeing with the third as least favorable.

C. FINDINGS

Cross tabulation of scores on the *F* scale with the health insurance item exhibited the postulated relationship. Three x 3 contingency tables were set up for each of the four classes. Although the relationship held in all four groups, a legitimate use of a chi square test of significance could not be made, some cells having an expected frequency of less than five. In order to test the significance of the relationship, the four classes were combined. The results are presented in Table 1. The trichotomization of *F* scores was made solely on the basis of the distribution, the goal being the achievement of as nearly three equal groups as possible. The mean *F* score for the low authoritarian group is 56.6, for the medium, 70.3, and for the high, 82.6. Table 1 illustrates quite markedly the tendency for the low authoritarian medical students in our samples to be more likely to favor government aid than the highs; and conversely, the table also reveals the tendency of the highs to favor the status quo more than the lows. Examining each class separately, we find that the eight midwestern senior students who favor Alternative 1 have a mean score of 59.3 on the *F* scale; the 30 who favor the status quo, a mean of 70.0. The mean for the 16 in the junior class who favor government aid is 61.4; for the 27 who support the present arrangements the mean is 73.0. At one eastern school the six advocates of government

TABLE 1
ATTITUDES TOWARD SOCIALIZED MEDICINE BY *F* SCORES

Authoritarianism	Low	Medium	High
Mean Scores	56.6	70.3	82.6
Range	36-65	66-76	77-107
Attitude			
Govt. Aid	20%	5%	4%
Private Insurance	62%	65%	64%
Status Quo	18%	30%	32%
Total	100% (139)	100% (111)	100% (106)

Chi square 25.6.
Beyond .001 level.

assistance have a mean score of 48.8, the 19 proponents of the status quo, 77.5. At the other the mean of the six in the first group is 59.7, of the 18 in the third, 66.9. Except for the latter group where the level of the significance between the means is only .13 (two tailed test), the differences between the two groups are well beyond the .05 level in each case.

A closer examination of Table 1 reveals that those who favor some sort of health insurance arrangement tend to be more similar to the supporters of the status quo than to the supporters of government assistance. The fact that the supporters of socialized medicine are almost wholly composed of the lowest scoring third on the *F* scale would seem to provide rather direct confirmation of our previous assertion that individuals at the extreme end of a distribution are likely to be the most resistant toward pressures to adopt a value system conforming to institutional norms. To some extent, of course, this anomaly arises from the fact that the three alternatives do not fall along a unitary dimension of favorableness to socialized medicine, it being equally as possible for an extreme opponent to favor private health insurance as to oppose any kind of change.

There is a further implication in this situation, one which is relevant to our previous discussion of the types of distribution occurring where both personality and institution are acting as determinants of attitudes. Assuming that alternatives two and three are both acceptable to the institutional value system, does our finding indicate that in such cases a dichotomous distribution of attitudes results? Additional data suggest that the answer is no. The four classes that form our sample have been administered questionnaires asking the question on socialized medicine throughout their medical school career. Table 2 gives the proportion of students within each of the four classes who favor government assistance as freshmen, sophomores, juniors, and seniors. An examination of Table 2 shows that

TABLE 2
PROPORTION OF MEDICAL STUDENTS FAVORING GOVERNMENT ASSISTANCE
AS FRESHMEN, SOPHOMORES, JUNIORS, AND SENIORS

Year	Mid- Western Sr.	Mid- Western Jr.	Eastern one	Eastern two
Freshmen	13%	20%	14%	*
Sophomores	9%	23%	13%	10%
Juniors	9%	20%	12%	2%
Seniors	11%	**	5%	7%

* Question not asked of Eastern Two when freshmen.

** At time of last administration Mid-Western Jr. in junior year.

in general the proportion of students favoring socialized medicine remains fairly constant. The most reasonable inference would seem to be that the medical school environment has relatively little influence on attitudes toward socialized medicine, and that the attitudes which are held before entering medical school do not change. Most likely, those individuals who enter medicine are, even among low scorers on the *F* scale, those who do not favor socialized medicine. Since the correlation between authoritarianism and attitudes toward socialized medicine is not unity, there is a large reservoir of low scorers who are opposed to socialized medicine. Only among the extremely low scorers on the *F* scale, where the proponents of socialized medicine are concentrated, and where the attitude is held with great intensity, is there a large number of individuals who both choose medicine as a career and also favor government assistance.

The only exception to the trend is at one Eastern School where there is a slight but consistent movement away from favoring government aid. Even where the institution seems to have an effect, the resulting distribution does not seem to be either homogeneous or dichotomous. The six individuals who favor government aid are all in the lowest third of *F* scale scorers. But the proportion who favor the status quo among the medium and high scorers are 10 and 30 per cent respectively. The result would seem to favor the argument put forward earlier, namely that pressures lead to equal changes in attitudes in the individuals subjected to such pressures.

D. DISCUSSION

When different investigations of the same problem come up with contradictory findings, continued faith in the possibility of valid scientific generalizations requires that a reasonable explanation of the discrepancies be adduced. What are reasonable explanations which might apply to the present case? One possibility may be that Libo's results are based upon a unique and un-

replicable situation. The conditions which have been enumerated as prerequisite for the dissolution of a general relationship between a social attitude and personality characteristics do not exist in the schools in our samples, and probably do not in most medical schools, but may in the University of Maryland, the source of Libo's respondents. However, there is no evidence for assuming that Maryland is a distinctive institution on these criteria, and we can consider this explanation only as a remote possibility. In fact, as we shall now see, insofar as characteristics of the University of Maryland are reflected in the scores on the two instruments used, they seem to be quite similar to those of the schools in our samples.

How does Libo's sample compare with ours with reference to scores on the *F* scale and attitudes toward socialized medicine? Although he suggests that scores of his sample on both scales are rather constricted, and that his group, therefore, is unusually homogeneous on these dimensions (5, p. 134), a closer examination of his data would seem to show that this is not the case. The range on the *F* scale for Mahler's sample is 48-148, the standard deviation, 21.7; for Libo's sample they are 44-147 and 20.5 respectively. It would seem, therefore, that the variance within Libo's sample is not different from Mahler's. True, Libo mentions that both his and Mahler's sample show unusual constriction on the *F* scale. The standard deviation of item scores is approximately .70 in both groups, and this Libo considers less than average. In arguing thus, Libo may well be thinking of a perfectly normal distribution with a mean at the theoretical neutral point of 4.0; in which case, for a scale with a six-point range, the standard deviation would be one. However, in most of the research reported on the *F* scale, the mean is well below 4.0; hence, the standard deviations are approximately .70, the same as found in our samples. Nor in terms of mean scores is Libo's sample different from ours. Although he does not give the mean for either of the scales, the range and standard deviations he presents would suggest that the item mean on the *F* scale for his sample is somewhat less than 3.0. The item means in our samples for the 10 unreversed *F* scale questions ranges from 3.3 to 3.7. Since, as will be shown later on, the 10 items used here are the 10 best discriminators, this difference does not reflect any difference in the nature of the samples.

In arguing that Libo's sample differs neither from our samples or from others in terms of the *F* scale, it was possible to go into some detail. Because of the different indicators used, it is not possible to do so with the measures of attitudes toward socialized medicine. Although the range on the Mahler scale is practically the same for both the Stanford and the

Maryland samples, the standard deviation in the latter is much smaller. Consequently, there seems to be no question that a greater homogeneity of attitudes toward socialized medicine prevails among the medical students. But is this homogeneity greater than that found among the medical students in our samples? According to Libo, 10 per cent of his sample obtained a score indicating absolute approval of socialized medicine. This proportion is almost identical with that in our classes where out of a total of 358 students, 36 favor government assistance. This would seem to provide some indication that our samples do not differ from Libo's with respect to attitudes toward socialized medicine. Additionally, the question might be raised whether constriction of scores on Mahler's scale is relevant. Even at the school where the proportion of students favoring government aid is smallest, a statistically significant relationship was found.

Although we have presented evidence indicating that on various criteria Libo's sample does not differ from ours, there is of course the possibility that the sample he used may be distinctive on other but unknown grounds, which are relevant for the relationship between the two variables. At this point, however, we would like to propose an explanation of the discrepant findings for which at least indirect evidence can be adduced. The basic methodological question we wish to raise now is whether the version of the *F* scale administered by Libo does in fact measure authoritarianism among medical students. One of the pitfalls of which researchers using scales should be cognizant, is the possibility that items have lost their ability to discriminate along the dimension being measured. Changing times may lead to changed meanings, and particular groups may respond uniformly to the value content of an item. Among various samples of college undergraduates, Christie, *et al.*, found that many of the original *F* scale items were discriminated significantly in an item analysis (3). Most of these items were ones which both high and low scorers rejected. The item mean of the items retained was approximately .70 points higher than of all original items. This finding, most likely reflecting the changing meaning of items over time, would seem to indicate that many of the items which Libo used are not measuring authoritarianism.

The peculiar educational status of medical students is another factor which needs to be taken into account. Exposed to four years of college and four years of medical school, a certain degree of intellectual sophistication is probably characteristic of medical students, and such a group is hardly likely to accept many of the rather implausible items on the original scale. Nor are many medical students likely to accept many of the anti-

science items which presumably measure the authoritarian syndrome. If therefore, the cumulative effects of changes over time, intellectual sophistication, and an ethos favorable to science are taken into account, the trustworthiness of the original *F* scale as a measure of authoritarianism in Libo's sample is questionable.

If our argument is valid, if the *F* scale did not measure what it was supposed to measure, this would be shown by a low split-half reliability, and it is unfortunate that Libo did not present this information. Since he has not, we will attempt to provide evidence for our conclusions through a further analysis of our own data.

The 20 items used in the present study are composed of the 10 original *F* scale items and the 10 reversals which discriminated best in an item analysis conducted among samples of college undergraduates (3). Despite this care in the selection of items, there is evidence indicating that even the present version of the scale is far from being a perfect measure of authoritarianism among medical students. In one of the schools in our sample, the split-half reliability of the 10 original items is but .34. In addition, the responses to a number of the items tend to be clustered at one or the other end of the distribution: seven of the items, including all those referring to science as well the famed paranoid item about plots hatched in secret places, have means of less than 3.0; and two items have means of 5.0 or better. Of the 10 original items which discriminated best among college undergraduates, almost half seem to lose their ability to do so in samples of medical students.

To determine whether the items differ in their ability to discriminate along the dimension of favorableness toward socialized medicine, the scores of the four classes combined on each of the 20 *F* items were compared for the two extreme groups on the health insurance question. The item scores were broken at the median and correlations between the items and attitudes toward socialized medicine were computed by means of Phi/Phi Maximum.⁶ The correlations ranged from $-.07$ to $.69$, only nine of 20 being significant at the .05 level or better. (Original and reversed items did not differ in their ability to discriminate, five of the nine being reversals, four originals.) To a large extent, ability of an item to discriminate on attitudes toward socialized medicine seems to be a function of its ability to discriminate along the authoritarian dimension. The two items on which the medical students

⁶ The author wishes to express his gratitude to William Martin of the Bureau staff, whose paper "An index for measuring association between two dichotomous attributes" (dittoed), provides an extremely rapid and simple method for computing this measure of association.

obtained a mean of 5.0 or more failed to show a significant relationship with favorableness toward socialized medicine. The other non-differentiators are items, responses to which are either clustered at the low end of the distribution or reflections of general knowledgeability and sophistication. Often, as in the case of the following two examples, the above characteristics are combined: "Most people don't realize how much our lives are controlled by plots hatched in secret places;" and "Most honest people admit to themselves that they have sometimes hated their parents." We can conclude that among medical students, many *F* scale items do not discriminate along the authoritarian dimension, even where the items are carefully selected, and further, that the proportion of items in the version used by Libo which did not do so is probably even greater. If authoritarianism is not measured, we certainly need not expect any relationship between it and other variables.

E. SUMMARY

Although Mahler reported a negative correlation between authoritarianism and favorable attitudes toward socialized medicine among a sample of Stanford undergraduates, Libo found no relationship between these two variables among a sample of University of Maryland senior medical students. To explain these findings Libo hypothesized that a relationship between a social attitude and personality characteristics will be dissolved when the individuals concerned are located in an institutional setting which is significant to them, and which has a specific, articulate ideology with reference to that attitude. After making explicit what was felt to be certain dubious assumptions underlying his hypothesis, we studied the relationship between *F* scores and attitudes toward socialized medicine in four samples of medical students. It was found that favorableness toward socialized medicine was negatively associated with authoritarianism.

To explain the discrepancies in the findings, we raised the possibility that the version of the *F* scale used by Libo did not discriminate along the authoritarian dimension among medical students. In support of this possibility, we showed that even those items which discriminated best among undergraduates seemed to lose their power to do so among medical students. In addition, we showed that the existence of an association between attitudes toward socialized medicine and a particular item was to some extent contingent upon the ability to discriminate along the authoritarian dimension.

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STATUS CONSENSUS, LEADERSHIP, AND SATISFACTION WITH THE GROUP*

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A. INTRODUCTION

Bales and his co-workers (5, 9), in their study of rôle differentiation in small groups, introduce the concept, status consensus. Operationally, status consensus is the degree of agreement among the rankings by group members of all the group members (including self) with respect to the contribution of "best ideas" and "group discussion guidance." While recognizing the circular causal relationship between behavior and expectations, Heinicke and Bales (5) suggest that overt consensus in rankings reflects agreement among the group members as to the criteria for a status continuum as well as agreement on the relation of the members to that criteria. Agreement leads to the avoidance of conflict and hence to greater productivity and satisfaction with the group. When laboratory groups were compared, high consensus groups were more productive and their members more satisfied with their group than were low consensus groups. It is the purpose of this paper to (a) extend these findings to non-laboratory groups, (b) examine some alternative ranking procedures, and (c) consider an alternative conceptual interpretation of status consensus.

Procedures for determining the degree of consensus in a group which depend upon the group members ranking all the members of the group are limited to groups of small size and to laboratory groups. With larger groups a large error component will enter the rankings since generally a significant proportion of the membership either will not be differentiated or will not be differentiable by the other group members. Further, groups in the field generally will not be favorably disposed to take the time and the effort to rank all group members, assuming they are capable of making the discriminations required of them in the relatively undifferentiated portion of the membership.

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² Portions of this paper were read at the Midwestern Psychological Association, Chicago, Illinois, May 4, 1957.

Several considerations suggest alternative procedures to the method of Bales and his associates. First, the high intercorrelations between participant leadership ratings, participant rankings on ideas, guidance, and influence, and observer ratings on leadership must be recognized (9, 3). "There is good evidence that members of a group can identify reliably those persons who exert most influence on them and that leaders defined this way are closely correlated with leaders identified by external observers and other criteria" (3, p. 881).

A second consideration is Berkowitz' finding of a negative correlation between leadership sharing and satisfaction with the group. "The more the chairman is the sole major behavioral leader the more satisfied the group with its conference. This can be seen in the following correlations. Satisfaction increases: the more the chairman controls the group's process, the more functionally differentiated he is, and the greater the proportion of functional units addressed to him" (1, p. 233). Berkowitz has further evidence that the negative effects of sharing is not due to the leadership sharing being done in opposition to the leader. "In general, then, the indications are that cohesiveness and member satisfaction may be lessened by leadership sharing even though the group is in a supporting relationship with its designated leader, the chairman" (1, p. 235).

Third, the rankings made by the group members may be thought of as the result of a series of judgments regarding an attribute of a set of stimuli rather than as an expression of choice or preference. When the members of a group are ranked in order by the group members according to their contribution of "best ideas" or their contribution to guiding the group's discussion, the ranking is a result of a series of judgments about the past behavior of the group members. Failure to agree on the rankings reflects ambiguity of the stimuli, i.e., the past behavior of the group members. To the degree that the relevant cues are ambiguous, e.g., to the degree that guidance behavior is distributed over many group members, disagreement in rankings will occur. Leadership sharing results in disagreement in rankings—and to decreased satisfaction with the group.

In the indices to be described it was assumed that the degree of leadership sharing—or the extent to which leadership was focused or distributed—could be assessed by the degree of agreement among the group members on who was placed in the first rank.

Several indices of agreement on the assignment of individuals to the first rank are possible. The degree of agreement may be expressed in terms of the number of different group members assigned to the first rank. The *dis-*

person index will be the number of different group members ranked first divided by the number of different first rankings possible. A second index, the *per cent-agreement* index, is the proportion of first rankings received by the person most frequently ranked first.

Moreno and others (4, 6) have noted that the familiar skewed distribution of sociometric status scores develops as a function of the length of time the group has been in existence. Initially choices tend to be reciprocal, but as the group continues, choices tend to be concentrated more and more on fewer and fewer individuals. The skewed distribution reflects agreement among the group members as to who will receive first rank. When the criterion for ranking is a specific form of behavior, e.g., guidance, as contrasted with a personal preference, e.g., liking, agreement in first rankings will be a function of the degree to which the relevant rôle behavior is concentrated in one or a few members. Differences in the skew of the distribution reflect differences in the degree of agreement among the group members as to the relative ranking of group members. Although agreement in rankings could be measured by the amount of skew present, such measures are not very satisfactory, particularly with small samples.

Alternatively, the skewness of the distribution of rankings may be considered as a departure from the rectangular distribution expected on the basis of a chance or random distribution of choices. A measure of the degree of randomness in a distribution of rankings will provide a measure of the degree of disagreement in the rankings. Information theory, borrowing from the entropy measures of thermodynamics, provides an appropriate index of the degree of randomness in the distribution of rankings.³

B. PROBLEM

Following Wilson's discussion of information theory in Osgood (8):

If an event is defined as receiving a first rank, a state as the proportion of first rankings received by a group member; and a system as a set consisting of the proportion of first choices received by each group member, then the entropy $H_{(1)}$ of the system, i.e., the degree of randomness in the distribution of first rankings in the group is defined by the formula:

$$H_{(1)} = -\sum_i p_{(i)} \log_2 p_{(i)}.$$

Where $p_{(i)}$ is the proportion of first choices (events) received by a given group member (state).

³ The author is indebted to Dr. Richard Videbeck of the University of Nebraska for the suggestions which led to the use of the entropy measure.

If one member of the group received all the first choices, then entropy is zero ($H_{(I)} = 0$) since one $p_{(i)} = 1$ and all others are zero. Under these conditions (where one state always occurs) the system is completely predictable from the knowledge of the one event. Conversely, entropy is maximal when the set of $p_{(i)}$ s are all equal.

Since the value of $H_{(I)}$ increases with the number of group members, $H_{(I)}$ may be divided by its maximal value for the size of the group (number of states). The maximal value of $H_{(I)}$ is $\log_2 m$, where m is the number of group members. Thus the relative entropy formula

$$H_{rel(I)} = \frac{-\sum_i p_{(i)} \log_2 p_{(i)}}{\log_2 m}$$

provides an index of randomness which can be used to compare groups of varying sizes. Since tables have been prepared giving the value of $p_{(i)} \log_2 p_{(i)}$ for varying values of $p_{(i)}$, determination of $H_{rel(I)}$ is a fairly simple and rapid procedure (2, 7). The per cent-agreement index makes use of the information for only one state (one $p_{(i)}$) in the system rather than all states and the proportion, $p_{(i)}$, is used rather than $p_{(i)} \log_2 p_{(i)}$.

The hypothesis to be tested, then, is that the degree of agreement in a group on first rankings will be positively related to the mean level of member satisfaction with the group.

C. METHOD

1. Subjects

Subjects for the study were the members of 13 girls' clubs participating in the Y-Teen program of the local YWCA and organized by school and grade. All but one of the clubs were from junior high schools. The exception was a high school club. Membership in the participating clubs ranged from 13 to 48. Attendance at the club meeting when the questionnaires were administered varied from 10 to 30 for a total of 230.

2. Procedure

After a short business meeting the group was turned over to *E* who prefaced the administration of the questionnaires with a few general remarks about the purposes of the study. After copies of Questionnaire I were distributed, the girls were instructed in the use of the rating scales and each question was explained in turn. Questionnaire I consisted of the following questions each followed by a 10-point graphic rating scale:

1. One of the things that clubs like yours do is plan for talks, parties, dances, etc. Sometimes clubs make plans but seldom seem to carry them to the point of actually having the program or party. Other clubs are very successful in doing well the things they plan. With respect to your club make a check on the line below indicating your opinion regarding your club.

2. On the average, thinking of all the members of your club, do you think it is a hard working group?

3. As all of us know, the members of a club differ in the degree to which the other club members listen to what they have to say, consider their likes and dislikes, and in general accept or reject them. To what extent do you feel that you were accepted by your club?

Questionnaire I was collected and Questionnaire II distributed and explained. In Questionnaire II the girls were asked to rank in order at least three members of the club with respect to the following criterion:

In this research we are interested in finding out who are the most valuable members of the club. Valuable members are those girls who do the most in helping the club do the things it wants to do. Will you please list in the space below the club members whom you think are the most valuable to the club?

D. RESULTS AND DISCUSSION

Since the indices of consensus are very similarly derived, the high inter-correlations obtained (Table 1) are not unexpected although the large proportion of common variance may be due in part to the markedly skewed

TABLE 1
INTERCORRELATIONS OF THE INDICES OF CONSENSUS AND THEIR CORRELATION
WITH SATISFACTION WITH THE GROUP

	Per cent-agreement	Dispersion index	Satisfaction with the group
Entropy	— .97	+ .95	— .56
Per cent-agreement		— .86	+ .49
Dispersion Index			— .51

Note: $N = 13$, $r_{05} = .55$. Coefficients are Pearson product-moment correlations.

distribution of first rankings in all groups. A relatively high level of agreement on the first rank reduces the amount of additional information contributed by those judges disagreeing with the other group members.

The predicted relationship between consensus on the first rank and mean satisfaction with the group is also confirmed. Although the differences in the correlations are slight, it is noteworthy that the entropy measure, which

takes the greatest amount of information into account, has the highest correlation with satisfaction with the group.

Further support for the hypothesis comes from a preliminary study. Data were analyzed from eight college student groups from religious houses, *YWCA*, etc. The groups ranged in size from 8 to 23. The data included responses to a rating scale similar to Item 1, Questionnaire I, and a questionnaire essentially the same as Questionnaire II described above. The rank order correlation between the dispersion index and a rating of satisfaction with the group was .63, the relationship being such that the smaller the dispersion of rankings, the higher the rating of satisfaction with the group. With an n of eight the p value for $r = .63$ is .09 for a two-tail test of significance.

There exists, then, a relationship between two indices characterizing an aggregate. One index, satisfaction with the group, is clearly an additive parallel measure of individual responses. The analysis could have been accomplished using the individual rating of satisfaction with the group as the dependent variable and the individual as the unit of analysis. The indices of consensus may be conceived of as a group variable—an aggregative property peculiar to the group. However, since the indices of consensus reflect the proportionate number of individuals not assigning the first rank to the person most frequently assigned to that rank, it is necessary to determine whether there is a relationship between failing to agree with the majority (in one group, the plurality) in assignment to the first rank and satisfaction with the group. If a relationship is present, then the correlation between consensus and satisfaction with the group becomes, in part at least, a matter of an individual rather than a group factor. As a matter of fact (Table 2) a portion of the variance in satisfaction with the group is a matter of an additive parallel individual measure—whether or not S ranked first the group member most frequently ranked first. It should be noted that although the total number of subjects was 230, the data for 22 S s do not appear in Tables

TABLE 2
SATISFACTION WITH THE GROUP AS A FUNCTION OF RANKING OR NOT
RANKING THE HIGH RANKING MEMBER FIRST

	Mean	Sigma	N
S s ranking the high ranking member first	8.7	1.49	153
S s not ranking the high ranking member first	7.4	1.43	55

The difference between means is significant at the .001 level ($t = 5.25$).

2, 3, and 4. Twelve of the omitted *Ss* were the high ranking members of each club. Although the girls were instructed to list themselves first if they thought they should be first, it was clear that they did not do so. Consequently, these data were excluded from the analysis. For one club of 10 members there was no high ranking member. Three members each received three first rankings. The data for this club was also omitted leaving a total of 208 *Ss*.

The next problem was to determine whether the consensus variable was contributing to the variance in satisfaction with the group over and above that contributed by agreeing or disagreeing with the remainder of the group. To do this the consensus continuum was dichotomized and the high and low groups' ratings of satisfaction with the group were compared. A separate analysis was done for those members assigning first rank to the high ranking member and those not assigning first rank to the high ranking member. The findings (Tables 3 and 4) indicate that the degree of consensus in the group contributes to the variance in satisfaction with the group over and above that contributed by *S's* agreement or disagreement with the majority ranking of the most important member.

TABLE 3
SATISFACTION WITH THE GROUP AS A FUNCTION OF THE DEGREE OF CONSENSUS
IN THE GROUP—*Ss* RANKING THE HIGH RANKING MEMBER FIRST

	Mean	Sigma	N
High consensus in <i>S's</i> group	8.9	1.52	92
Low consensus in <i>S's</i> group	8.4	1.45	61

The difference between means is significant at the .06 level ($t = 1.91$).

TABLE 4
SATISFACTION WITH THE GROUP AS A FUNCTION OF THE DEGREE OF CONSENSUS
IN THE GROUP—*Ss* NOT RANKING THE HIGH RANKING MEMBER FIRST

	Mean	Sigma	N
High consensus in <i>S's</i> group	8.1	1.10	25
Low consensus in <i>S's</i> group	6.9	1.43	30

The difference between means is significant at the .001 level ($t = 3.47$).

Unlike the laboratory groups of Bales and his associates, the girls' clubs had an existing formal group structure including officers elected some five to seven months prior to the meeting at which the data were collected. The position that the status continuum under study was one of leadership is supported by the finding that in all clubs the high ranking individual was the club president.

There are a number of differences between the earlier studies and the present one which must be evaluated before definitive conclusions can be

made, e.g., age and sex differences, on-going groups rather than laboratory groups, differences in group goals. Further, it is possible that the intervening mechanism may not be efficiency of the leader rôle when the functions are focused rather than distributed, nor shared rôle expectations but another variable, e.g., the subsequent suggestion by Bales and Slater (9) that differences in evaluation of the nature and the importance of the group goals underlie differences in consensus.

E. SUMMARY

It was hypothesized that the degree of agreement among the group members on who ranked first on a continuum defined as leadership is related to satisfaction with the group. Three indices of agreement on the first rank were developed including an entropy measure. Members of 13 girls' clubs (230 Ss) rated their group on its effectiveness in attaining group goals and ranked in order three or more group members who did the most in helping the group attain its goals. Two sources of variance in satisfaction with the group were ascertained: (a) whether or not S ranked the high ranking group member first, and (b) the degree of agreement in the group on first rankings. The findings are related to status consensus, focused vs. distributed leadership, and group effectiveness.

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DETERMINANTS OF POLITICAL PARTY PREFERENCE*

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A. INTRODUCTION AND PROBLEM

The most frequent technique utilized in studying voting behavior is the polling technique in which an attempt is made to predict the outcome of an election. By and large, polling is concerned with the accuracy of prediction rather than the factors that cause respondents to reply the way they do. A second approach, which might be referred to as demographic, seeks to relate voting statistics to a wide range of factors, primarily social, economic, ethnic, and religious. Knowledge of these factors without any knowledge of individual preferences within the group permits prediction of voting choice with a rather high degree of accuracy. Still another, in which category this study falls, is an attempt to study the factors operating on an individual which cause him to make a certain choice, or to change his choice.

An extensive review of the psychology of voting has been presented by Lipset, Lazarsfeld, Barton, and Linz in Lindzey (6). A major portion of their review is devoted to the study of political behavior through an analysis of voting statistics. Their review of panel technique studies indicated that voters' choices were analysed most frequently by the study of demographic or social factors. Rarely has the individual, as an individual, been followed intensively in a panel.

The rôle of personal experience and personality structure in the formation and retention of attitudes on political and social issues has been studied intensively by Smith, Bruner, and White (9). These authors studied a small number of people in an attempt to relate ideographically their opinions about communism to their total outlook on life. They were able to show how the particular personality structure of each of their subjects constituted a stabilizing and unifying framework for their attitudes toward communism and Russia. These opinions were not simply random events but were closely allied to the personality characteristics of each subject.

Studies of voting choice and psychological test data have been most fre-

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¹ This report is based on a thesis by the first author submitted to the Pennsylvania State University. It is part of a larger study directed by the second and third authors.

quently attempts to establish correlations between voting choice and score on the *F* Scale. Janowitz and Marvick (3) studied the relationship between political behavior and authoritarianism in the 1948 election and found a significant correlation between *F* scores and feelings of political ineffectiveness. Lane (5), in a study of the *F* Scale and voting behavior in the 1952 election, corroborated the results of Janowitz and Marvick. Two similar studies were conducted in 1952 after President Truman had dismissed General MacArthur. They were based on the premise that individuals scoring high on the *F* Scale would tend to be attracted to an authoritarian symbol, in this case, General MacArthur. Gump (2) concluded that those students favoring MacArthur had significantly higher *F* scale scores than did those who favored Truman's actions. Investigating preferences for possible presidential candidates, Milton (7) found that those students who favored MacArthur had significantly higher *F* Scale scores than those favoring other possible presidential candidates. All told, there has been a certain rigidity about the repeated use of the *F* scale which has restricted investigations of a more intensive nature covering a wider range of variables.

One notable exception to these trends in the study of determinants of voting behavior is the Elmira election study (4). Among other variables, Kitt and Gleicher investigated the effects of the voting intention of friends and family and concluded that homogeneity of friends' and family's voting intentions tended to cause shifts in respondents voting intentions which brought them, the respondents, closer to their friends' and family's points of view. The method used in the Elmira study, following a large number of subjects over a period of time, was adopted in the present research and an attempt was made to replicate Kitt and Gleicher's findings regarding the effects of friends and family attitudes on voting behavior. In addition, it was possible to examine other variables as possible determinants of voting intentions.

The present research is a part of a larger study concerned with the development and change of preferences for parties and candidates. In this report we are concerned with the rôles of information, attitudes, and social pressures as correlates of claimed status as republican, democrat, undecided, or independent. Hypotheses concerning the effects of information, attitudes, and social pressures were drawn and these hypotheses were tested using measures developed for the purpose.

B. METHOD

1. *Subjects and Procedure*

This study was begun in the fall of 1955. Between 500 and 600 male university students were selected as a panel. The initial selection involved whole dormitories and whole fraternities. In the fall of 1956 the dormitory residents moved to rooming houses or fraternities. All subjects were surveyed in December 1955, April 1956, and October 1956. On each occasion they stated their preferences for parties and for candidates. From the three occasions information was gathered by a questionnaire concerning their degree of interest in politics and their parents' and friends' political preferences. Scores were obtained on the *F* scale (1), a social status striving scale (8), and specially constructed tests of information, bias, and gullibility.

The information test contained 60 items requiring knowledge of current events, structure of the federal government, and names of prominent public figures. Following the information test, bias and gullibility were measured in a disguised information scale of 20 items. The validity of these two tests is primarily a matter of face validity at this stage. An attempt was made to measure bias by asking our subjects which party, or both, was identified with certain popular issues. Those issues selected were part of both party platforms. For example if a subject identified either party with the issue of containment of communism abroad he was considered biased in favor of that party. Gullibility was measured in the same way except that the issues were platitudinous, such as restriction of the flow of narcotics, or separation of church and state. Unless he indicated that both parties were committed to these goals a subject was considered gullible with respect to the party chosen. These methods were designed to test the hypotheses which follow.

2. *Hypotheses*

a. Social factors. In the area of social factors we know that party and candidate choices are, as any other behavior, subject to social pressures from friends and parents. The more homogeneous the pressures, the greater the conformity. However, the group to which one aspires also influences one's behavior, and the greater the striving to attain membership in a group, the greater the influence of that group. In addition to these general principles, it should be noted that for this sample, Republican party affiliation was almost universal in the highest status groups. Based on what is known about pressures from parents, friends, and reference groups the following hypotheses were drawn.

Hypothesis 1. Subjects will tend to follow the political viewpoint of their parents.

Hypothesis 2. Subjects will tend to hold the same views they perceive their friends to hold.

Hypothesis 3. Republican subjects reporting all Republican friends will show higher Social Status Striving scores than Republican reporting Democratic and Republican friends.

Hypothesis 4. Subjects whose parents are undecided or independent will be more likely to be undecided or independent than those whose parents are divided with one Republican and one Democratic parent.

b. Attitudinal factors. In addition to the rôle of the reference group, the attitudes of the subject warrant investigation. Among these attitudes, reported interest in political matters may be a significant antecedent to eventual choice. The degree to which interest leads to accumulation of accurate and inaccurate information is of importance, especially where interests and information are necessary to defend minority points of view. In political matters, high reported interest would lead to a high degree of information which would be expected to produce discriminating judgments about party claims. Finally, in a broad sense, identification with a party may be an expression of a more general attitude toward the social order.

Hypothesis 5. Democrats, being in a numerical minority, will report more interest in politics.

Hypothesis 6. Democrats and Republicans will tend to show favorable bias toward their party on the specially constructed bias scale.

Hypothesis 7. Democrats and Republicans will show higher gullibility scores in the directions of their respective parties on the specially constructed gullibility scale.

Hypothesis 8. Those reporting greater interest will score higher on the information scale.

Hypothesis 9. *F*-scale scores will be higher for those who claim identification with the Republican party than for those who claim identification with the Democratic party.

Hypothesis 10. Republicans who report low interest in politics will show higher gullibility scores than those reporting high interest.

Hypothesis 11. The undecided and independents will report lower interest in politics than the Republicans and Democrats.

c. Informational factors. There is not a political spokesman of any hue who has not exhorted his listeners to face the facts. What happens when some subjects have more facts than others? Does greater fact-facing lead to more

discrimination among party slogans? Do outnumbered groups feel compelled to muster more facts to withstand the pressure of the opinion of the greatest number? The present researchers felt that the answers to the last two questions would be positive and drew the following hypotheses.

Hypothesis 12. The members of the outnumbered party, Democrats in this setting, will have more information than the Republican majority.

Hypothesis 13. Those who call themselves independent will have higher information scores than those who are undecided.

C. RESULTS AND DISCUSSION

The results of the tests of these hypotheses are shown in Table 1. Where the direction of difference was predicted, one-tailed tests were used. In-

TABLE 1
RESULTS OF HYPOTHESES CONCERNING SOCIAL (1-6) ATTITUDINAL (7-11) AND
INFORMATIONAL (12-13) FACTORS AS DETERMINANTS OF PARTY CHOICE

Hypothesis	N	Test	Result	df	P
1	289	Chi square	181.34	1	< .01
2	323	Chi square	26.59	2	< .01
3	133	t test	1.83		< .05
4	62	Chi square	5.84	1	< .01
5	291	Chi square	2.35	1	> .05
6	123	Chi square	10.74	2	< .01
7	125	Chi square	8.35	2	< .01
8	254	Chi square	17.22	1	< .01
9	168	t test	.64		> .05
10	165	Chi square	2.16	2	> .05
11	391	Chi square	3.89	1	< .05
12	270	t test	1.78		< .05
13	103	t test	1.67		< .05

evitable loss of subjects reduced the final *N* to 431. The number of subjects varied considerably from one hypothesis to the next since the hypotheses did not necessarily apply to all subjects. The first four hypotheses are clearly confirmed. Social pressures are powerful determinants of voting choice. These findings confirm those of earlier studies. The undecided and independent voter is not just a compromise of a politically mixed marriage, rather there is a tradition of no party affiliation.

The confirmation of Hypotheses 6 and 7 indicates that identification with one party causes subjects to attribute to that party responsibility for initiating legislation of wide acceptance and also playing a unique rôle in maintenance of our way of life. This way of thinking is encouraged by political oratory. Recognizing this, it has been possible to develop measures of political attitudes which can be disguised as information tests, as had been done in other

areas. Furthermore, the scores on these disguised attitude scales, while significantly related to stated party preference, were independent of degree of interest or information.

Hypothesis 5 was not confirmed. Political matters were probably not of sufficient significance to either group for the expected process to occur, but the differences were at least in the predicted direction. When party affiliation is ignored, those reporting higher interest have higher information scores as shown by the confirmation of Hypothesis 8. Differences on the *F* scale between the two parties were negligible. The *F* scale may be more closely related to the rôle party affiliation plays in a subject's life than to the party with which he is affiliated.

On the rôle of information, Hypotheses 12 and 13 were confirmed. There are probably unidentified intervening factors, but at least we can report that members of minority parties score higher on tests of information about political matters. The undecided voter has plagued pollers in close elections. Our data indicate that he is hardly the reflective individual who had suspended judgment while he surveys the facts. On the contrary, in this population the independent and undecided are more likely to be less interested and less well informed. Getting his vote is more a matter of apathy reduction than persuasion.

All of these results were obtained on a population of male college students and generalizations are perilous. These subjects are presumably heading toward influential situations in their communities so that factors which influence their voting may be of more consequence than those for a similar sized sample of the general population. It is also clear from longitudinal studies of interests that choices at this age are relatively stable. Of course short term reactions against a particular party by its members are not studied here. It is probably the case that exploitation of these to reduce apathy in the fringes of the party is a most effective election winning technique. The modification of long term identifications is another matter for, as our results indicate, party preferences have heavy social and familial anchors.

In conclusion then, it would seem that for this sample the three factors investigated, social, attitudinal, and informational, are all determinants of voting behavior to some degree. However, the two most important ones are the social and attitudinal factors. It is true that subjects with higher interest have more political information, but their perceptions of the parties seem less dependent on information than on other factors, i.e., social striving and friends' and parents' attitudes. If it can be said that the attitudinal factors, including bias and gullibility, are an outgrowth of previous and present social

environment, then it appears the single most important determinant of long run voting behavior is the behavior of one's friends and family.

D. SUMMARY AND CONCLUSIONS

The rôles of information, attitudes, and social pressures as determinants of party preference, were studied on male college students over a period of a year leading up to the 1956 presidential election. Hypotheses concerning these determinants were drawn and tested. The results of the analysis of the responses of 431 subjects indicate that high relationships exist between the subject's preferences and those he reports for his parents and friends. His social aspirations and party preference appear to be related. His party identification is associated with a tendency to attribute popular causes and national policies of long standing to his own party. The independent and undecided voter is, in this study, apparently indifferent and less well informed than those with traditional party preferences.

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THE EFFECT OF PEER GROUP INFLUENCE UPON CONCEPT-ATTITUDE DEVELOPMENT AND CHANGE*

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A. INTRODUCTION

This experiment deals with attitudes from a concept-formation point of view. It is related to the work of Osgood and Tannenbaum (3) and the research of Staats and Staats (6, 7). In concept-formation studies, Ss generally learn to respond selectively to certain aspects of a stimulus pattern. For instance, Hanfmann and Kasanin (2) asked their Ss to sort into four piles blocks which differed in height, size, color, and shape. It is possible to place the blocks correctly only on the basis of the size and height dimensions. When these relevant dimensions are utilized, i.e., when the concept is learned, it is easy to sort the blocks correctly.

A similar situation occurs when individuals are perceived as members of a particular group. Certain dimensions define the group, and individuals who exhibit the characteristics required by these dimensions are perceived as belonging to this group. For some people, Negroes may be recognized by the dimensions "dark skin, thick lips, and kinky hair," or Orientals might be conceived through dimensions such as, "yellowish skin, dark hair, and slanted eyes." These are concepts, but they are not attitudes because attitudes require an evaluative dimension. An individual has an attitude toward a group of people when his concept of them includes an evaluative dimension, e.g., "yellowish skin, dark hair, slanted eyes, and *bad*." A concept-attitude, then, is a concept with an evaluative dimension.

A simple concept-formation method was employed to explore the effect of social influence upon concept-attitude development and change. Studies of the effect of social influence on judgment and perception, such as Asch's (1) group pressure research and some of Sherif's (5) explorations of frame of reference, have demonstrated the effect of pressures toward conformity. In these situations, S must depend upon the prior judgments of peers for a stand-

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¹ This paper grew out of an undergraduate seminar taught by the writer at the University of Massachusetts. Lawrence Blakely, Maurice Chefitz, Barbara Durkee, Ronald Lowe, Jr., and Joan Wolk participated in this seminar and served as confederates and data collectors.

ard upon which he can base his own behavior. When dissenters or leaders are introduced, *S*'s behavior is generally affected in the direction of their responses. In the present experiment a somewhat similar situation was posed with concept-attitude as the dependent variable. Peer member's responses were pitted against a "trustworthy" individual, and the effect of conflicting information from these two sources upon concept-attitude development and change was measured.

Consistency of reinforcement was a second variable introduced into this study. Consistency of reinforcement refers to the consistency with which *E*'s statements confirm or deny positive or negative evaluations. This variable was investigated previously (+), and it is included in the present experiment in order to study possible interactions with social influence.

B. METHOD

1. *Subjects and Materials*

A set of trait names was presented to 100 undergraduates who judged them as desirable or undesirable. Some example traits are *alert*, *homosexual*, *conceited*, *illiterate*, *prejudiced*, and *obedient*. Only traits judged desirable or undesirable with 90 per cent or greater agreement were retained for further use. Consequently, an empirical, evaluative dimension was built into the list of remaining traits since those selected had a strong positive or negative connotation. For the experiment, each word was printed in large letters on a separate 4" x 6" index card. The traits were used with 32 undergraduates who had not participated in making the original ratings.

2. *Procedure*

For concept-attitude development 50 traits, 25 positive and 25 negative, were presented to the *S*s in random order and one at a time. The *S*s were instructed to predict after the presentation of each word whether it was characteristic or not-characteristic of "a little known group of people." After each prediction, *E* said that the trait was indeed characteristic or not-characteristic of the "little known people."

Consistency of reinforcement was varied during concept-attitude development. For 16 *S*s, after each of their predictions, *E* consistently said "characteristic" for traits previously rated undesirable and "not-characteristic" for traits previously rated desirable. *E* was less consistent with the remaining 16 *S*s since he called characteristic 21 of the negative traits and four of the positive words, and not-characteristic 21 of the positive traits and four of the negative.

One-half of each set of 16 *Ss* gave their predictions orally after hearing the answer of three fellow students who were *E*'s confederates. The remaining *Ss* made their predictions without the confederates being present and without first hearing their responses. When the confederates were present, they always called not-characteristic the undesirable traits and characteristic the desirable words. Since *E* was always or almost always responding in an opposite fashion, the *Ss* were faced with two conflicting sources of information to which they had to adjust.

After the first 50 traits were judged, 25 different, randomly ordered words were given to all *Ss*. When these traits were presented, there were no confederates and *E* said nothing after each prediction. These words were used as a measure of concept-attitude strength. It is assumed that the stronger the negative concept-attitude formed, the higher the probability that an individual will continue to respond negatively toward the "little known people," and the greater the positive attitude, the higher the probability that he will respond positively.

Finally, to test concept-attitude change, *Ss* were shown 54 further words in random sequence. This time *E* reversed the response trend he had used during concept-attitude development: he called characteristic all positive traits and not-characteristic all negative traits. For this last set of traits, as with the 25 previous ones, *Ss* wrote their predictions privately. There were no confederates and no oral responses by the *Ss*.

C. RESULTS

For the 50 traits used during concept-attitude development and the 54 used during change, *S*'s score was the number of times he correctly predicted *E*'s response. The *S*'s score for the 25 traits used as a measure of concept-attitude strength was the number of times *S*'s answer corresponded with the answer expected of a person with a perfect negative concept-attitude, i.e., the strength score was obtained by counting the positive traits called not-characteristic and the negative traits called characteristic. The descriptive statistics for the three kinds of scores appear in Table 1.

Analyses of variance were done with the three sets of scores, yielding the results shown in Table 2. The development and strength data indicate a main effect beyond the .01 level due to consistency of reinforcement. There is also a main effect with the development scores due to peer group influence, and an interaction in the change scores between consistency of reinforcement and group influence. The first of these last two results is significant at almost the .05 level and the second is significant beyond this level.

TABLE 1
MEANS AND STANDARD DEVIATIONS FOR THE DEVELOPMENT, STRENGTH,
AND CHANGE SCORES

	Reinforcement	Development (50 traits)	Strength (25 traits)	Change (54 traits)
<i>Without peer responses</i>				
Mean	100	39.62	22.38	34.75
	< 100	30.37	15.25	42.00
SD	100	5.88	2.69	10.81
	< 100	5.98	5.26	8.10
<i>With peer responses</i>				
Mean	100	47.35	22.25	41.12
	< 100	31.87	19.12	36.38
SD	100	1.58	4.21	10.48
	< 100	8.71	5.71	8.71

D. DISCUSSION

The analysis of variance performed with concept-attitude development scores reflects an influence due to the confederate's responses. Those *Ss* whose predictions came after hearing peer responses obtained higher concept-attitude development scores. This happened even though the confederates always or almost always disagreed with *E*. In other words, in contrast with classical research (1, 5), peer responses under certain circumstances help to solidify diametrically opposed judgments. Apparently the confederate's responses are an important part of the stimulus complex by which the concept-attitude is learned. Peer responses aided concept-attitude development because they were cues which were highly predictive of *E*'s behavior. *E*'s responses, which contradict the confederate's reactions, were probably accepted as correct because of *E*'s prestige and apparent knowledge of the "little known people." Although the concept-attitude is more easily developed when there are peer responses to provide extra cues, there is no indication that its eventual strength is greater. In fact, the strength scores do not differ as a result of the confederate's presence.

An examination of the development means suggests that the influence from the confederate's responses occurred mainly under the high consistency of reinforcement condition. A *t* test indicates a difference due to peer group responses at less than the .05 level between the two groups receiving full consistency of reinforcement, but no such difference occurs between

TABLE 2
ANALYSES OF VARIANCE FOR CONCEPT-ATTITUDE DEVELOPMENT, STRENGTH AND CHANGE SCORES WITH
PEER RESPONSES, AND CONSISTENCY OF REINFORCEMENT AS INDEPENDENT VARIABLES

Source	<i>d f</i>	Development		Strength		Change	
		<i>M S</i>	<i>F</i>	<i>M S</i>	<i>F</i>	<i>M S</i>	<i>F</i>
Peer Responses (<i>P</i>)	1	171.12	4.02*	28.13	1.16	101.27	1.40
Consistency of Reinforcement (<i>R</i>)	1	1225.12	28.81**	210.13	8.63*	.50	.01
<i>P X R</i>	1	78.12	1.83	32.00	1.31	358.58	4.96*
Within	28	42.52		24.35		72.37	

* $p < .06$.

** $p < .01$.

the two lower consistency groups. Apparently, the cue value of the peer responses is considerably watered down by the ambiguity introduced when reinforcement is not entirely consistent, and, therefore, peer responses are not entirely predictive of *E*'s reactions.

The main effects for the development and strength scores due to consistency of reinforcement confirm the findings of an earlier study (4). In that research, there was also a difference among the change means. Those *S*s with the highest level of concept-attitude development showed least resistance to change; *S*s with relatively moderate scores showed most resistance; and *S*s with the lowest development scores obtained change means between the high and moderate groups. The only statistically significant difference among the change means was between the groups with high and moderate development scores. The development means for both conditions of reinforcement in the present experiment are not high relative to those of the former research; therefore, it is not surprising that consistency of reinforcement did not produce a main effect among the change scores of the present experiment.

A similar situation occurs when only the two groups who didn't hear peer responses are considered. Of the two groups who didn't hear peer responses, resistance to change was somewhat greater for the group which received higher consistency of reinforcement. This result is in line with previous research since the development scores of this last group are only moderately high. Of the individuals who heard the confederates, those with full consistency found it relatively easy to change and those with less consistency were more unyielding during the change session. As indicated in a previous case (4), the evaluative element of the traits should be most distinctly discriminated by *S*s with the highest level of concept-attitude development. Consequently, the *S*s with full consistency and group influence, who obtained the highest development scores, should be expected to change most readily. This, in conjunction with the results for the two other groups, accounts for the interaction affecting the change scores.

If it were possible to transfer the over-all results to a real life situation, it would be expected that a child who hears a fairly consistent point of view from prestige figures such as parents would develop a concept-attitude based on that view. The concept-attitude might tend to develop more rapidly if the parents were very consistent and the child always heard the opposite point of view from less prestigious and less trusted individuals. This concept-attitude, however, would not necessarily reach a higher asymptote and would be more susceptible to change than an attitude formed under more ambiguous circumstances.

E. SUMMARY

Attitude was expressed in terms of concept-formation, and a concept-attitude was defined as a concept with an evaluative dimension. A test was made of the joint effect of peer group responses and consistency of reinforcement upon concept-attitude development, strength, and change. The traits of a fictional group of people were predicted by *S*, and *E* said after each prediction whether *S* was correct or not. Some *Ss* made their predictions after hearing peer responses which were always or almost always contradictory to *E*'s response. Other *Ss* made their predictions without hearing peer responses. It was found that peer responses enhance concept-attitude development and influence concept-attitude change in interaction with consistency of reinforcement. The results were explained in terms of the cue value of peer reactions and the relative discriminativeness of the concept-attitude.

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RELATIONSHIPS BETWEEN PERCEIVED VALUES AND ACCEPTANCE OF A NEW REFERENCE GROUP*

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A. PROBLEM

The data reported in this paper were collected in one of a series of studies of the factors associated with the acceptance of a new secondary group as a reference group. In our usage, "reference group" is defined as a group with which the individual has established an affective identification and one of which he feels himself to be a part or wishes to be a part. Factors which could be involved in the process of acquiring a new reference group could theoretically be associated with the characteristics of the individual, the qualities of the group, relationships existing between the new group and the individual's established groups, or interrelationships between the characteristics of the individual and the qualities of the group. Previous papers by the present investigator reported the results of studies dealing with factors in each of the aforementioned categories (1, 3, 4, 5, 6). This paper will deal with the relationship between acceptance of a new group as a reference group and the relative compatibility between the perceived values of that group, the individual's own values, and the perceived values of other membership groups.

B. HYPOTHESES

The relevance of value congruity to the process of acquiring new reference groups has usually been treated axiomatically in theoretical discussions but has been exposed to little systematic empirical investigation. As a contribution to such systematic study, the writer proposed the following hypotheses for testing:

1. The greater the compatibility between the articulated values of the individual and the perceived values of the new group, the more likely the individual is to accept the new group as a reference group.

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¹ The data reported here were collected as part of an exploratory program of studies focussing on the personal and social components associated with the acceptance of new groups as reference groups, conducted under Contract Nonr-1597(01) with the Group Psychology Branch Office of Naval Research. We acknowledge with thanks the participation of John Kunz in this phase of the program in the capacity of research assistant.

2. The greater the incongruity in values between the new group and the individual's established groups, the less likely the individual is to accept the new group as a reference group.

3. When there is a conflict in values between an individual's established groups and the new group, those individuals who perceive the value system of the new group as more congruent with their own than the value systems of their established groups are likely to accept the new group more completely than are individuals for whom the situation is reversed.

We assume congruity of values to exert peripheral rather than central influence in the dynamics of acceptance of a new group. It can facilitate or impede such acceptance, but is not likely to be the primary reason for seeking membership in a new group. Hence, assuming that a given group offers certain definite and specific rewards to its prospective members, we should not be surprised to find a relatively low degree of association between value congruity and acceptance of the new group, but we should still expect to find a perceptible relationship.

C. METHOD

1. *Subjects*

Subjects were 146 unselected male freshman students in a municipal tuition-free college in an urban setting. The college community was considered the new group; off-campus groups and associates were treated as the prior groups making up the subjects' established hierarchies of reference groups. Because no dormitory accommodations existed at the college, most of the students commuted from their homes to the school, and continued to maintain contact with their home neighborhoods and, to some degree, with their previous associates. This fact made this sample a peculiarly appropriate population for the testing of our hypotheses involving the dynamics of the balance between established and new groups in relation to congruity with the personal values of the individual.

2. *Measures of Value Congruity*

For the purposes of this investigation, values were defined as "the things that are important for a happy life." On the basis of intensive interviews with about 25 selected students, the following 14 items were selected as being meaningful to our subjects and covering a wide range of values characteristic of our culture:

Being independent.

Earning a good deal of money.

Having congenial friends.
Helping others; people, animals, or the general community.
Doing a good job of work.
Achieving social or professional prestige.
Having fun.
Enjoying one's work.
Having economic security.
Doing exciting or stimulating things.
Achieving a position of power and importance.
Having a pleasant family life.
Fulfilling one's civic duties.
Self-development or self-expression.

This list was presented to our subjects three times, each time with a different set of instructions. The first time, subjects were instructed to rank the items in the order of their importance for "most of the students at _____ College." The second time subjects ranked the items in the order of their importance for themselves. The third time they ranked them as they believed their friends and associates *away from* _____ College would rank them.

Scores were the sum of the squares of the differences (ΣD^2) between rankings given the respective items. For example, the score indicating the degree of congruity between a subject's own values and the value system of the College groups was derived by comparing the ranks given by the subject to each item on his "self" ranking and on his ranking for "most _____ College students." The differences between the ranks assigned the respective items were squared and totalled. The total of the squared differences was the subject's self-college value congruity score ($S-C$). The scores were interpreted as indicating a negative relationship with congruity—the larger the score, the less congruity. In a similar manner, scores were derived to indicate degree of congruity between the subject's values and those of his off-campus associates, called self-off campus value congruity scores ($S-OC$). "Conflict" scores came from a comparison of rankings assigned to "most _____ College students" and to off-campus associates ($C-OC$). Finally, subtracting the $S-C$ scores from the $S-OC$ scores yielded "balance" scores, with the upper end of the range indicating more congruity with the new group (the College) than with established groups (off-campus associations).

3. *The Measure of Acceptance*

Acceptance of the new group (the College) as a reference group was measured by a questionnaire consisting of 58 multiple-choice type items.

which has been described in detail elsewhere (1). This questionnaire had a reliability coefficient of .82 (corrected by the Spearman-Brown formula) and had demonstrated its utility in several previous investigations (1, 4, 6).

Product moment correlations between the values scores and the acceptance criterion were used to test the hypotheses.

4. *Additional Measures*

At the same time that the rankings of values items were requested, measures of several other functions were secured. Although the results involving these are reported in detail elsewhere (2, 3, 5), they are mentioned here because relationships among them and the values measures may be helpful in assessing the utility and meaning of the latter. The functions the additional measures were designed to tap were, respectively, varying degrees of need satisfaction (by the College and by other groups), perceived differences in *mores* between the College and other groups, the direction of preferences for College or off-campus *mores*, and generalized satisfaction-dissatisfaction.

D. RESULTS AND DISCUSSION

Our first hypothesis involves the relation between one's own values and those of the new group. As formulated, it reads: The greater the compatibility between the articulated values of the individual and the perceived values of the new group, the more likely the individual is to accept the new group as a reference group. In our data, the *S-C* score provides a direct means of testing this hypothesis, inasmuch as this score is an index of the congruity of the values of the respondent and his estimate of College-held values. This score is derived in such a fashion that the higher the score the greater the incongruity of the value patterns; the lower the score, the greater the congruity.

For 146 cases, the correlation between the *S-C* score and the score representing degree of acceptance of the new group was computed. The coefficient of correlation (product moment r) proved to be $-.20$, significant at the .01 level of confidence. This coefficient may be interpreted as confirming the first hypothesis.

Our second hypothesis involves the relation between the values of the new group and those prevalent in the groups in which the individual has already established membership. As stated, this hypothesis reads: The greater the incongruity in values between the new group and the individual's established groups, the less likely the individual is to accept the new group as a reference group. In our data, the *C-OC* score offers a test of this hypothesis. This

score provides an index of the congruity of the perceived values of the College and those of the subject's off-campus groups; this score was derived so that the higher the score, the greater the incongruity, the lower the score the greater the congruity. To confirm the hypothesis, we would expect a significant negative correlation between the *C-OC* score and our index of acceptance of the new group. The correlation, when computed, proved to be $-.05$, not significant, though in the expected direction. The hypothesis fails of confirmation in this test, but as the discussion below will indicate, we need not reject it completely at this time.

Our third hypothesis involves the interrelation of the three value systems: the subject's own, that of his established groups, and that of the new group. This hypothesis states that when there is a conflict in values between an individual's established groups and the new group, those individuals who perceive the value system of the new group as more congruent with their own than the value systems of their established groups are likely to accept the new group more completely than are individuals for whom the situation is reversed. The "balance" score described above as derived by subtracting the *S-C* score from the *S-OC* was designed to provide an index to test this hypothesis. Again the correlation coefficient yielded was not significant ($r = -.05$) and the hypothesis fails of support. However, as with the second hypothesis, it need not be rejected without further examination of our data.

It would be pertinent, at this point, to consider the intercorrelations among our measures. These are presented in Table 1.

TABLE 1
INTERCORRELATIONS AMONG DIFFERENT MEASURES OF VALUE-CONGRUITY

Name of measure	<i>b</i>	<i>c</i>	<i>d</i>
<i>a.</i> Self-College (<i>S-C</i>)	.22	.25	.07
<i>b.</i> Self-Off campus (<i>S-OC</i>)	—	.47	.33
<i>c.</i> College-Off campus (<i>C-OC</i>)		—	.65
<i>d.</i> College-Off campus Balance (<i>S-OC</i> minus <i>S-C</i>)			—

All but one of the intercorrelations among the different "values" measures in Table 1 are statistically significant. This may mean that we are here dealing in part with a halo effect, resulting from the use of the ranking technique in each measure. To some extent, also, the correlations may be traceable to the involvement of like elements in some of the scores—for example the "self" ranking was involved in both the *S-C* and the *S-OC* scores. However, these possibilities do not seem sufficient to explain the differences in the size of the respective intercorrelations nor the extent of the

association indicated in some of the instances (notably, between *b* and *c*, and between *c* and *d*). We believe it might, therefore, be instructive to explore the meaning of these correlations individually, taking them at face value, and considering their intrinsic logic.

Thus, those subjects who perceive the values characteristic of the College group as close to their own, also tend to perceive the values of their off-campus associates in the same way. This may be because both groups actually are similar or it may indicate a generalized tendency toward projectivity. The fact that the *S-OC* scores showed no correlation with the acceptance measure, however, makes us think that our first suggestion is more likely to be the valid one. We know that some of our subjects entered the College community in the company of their high school companions, and continued the contacts with them off-campus; thus, their established groups and the new group were similar from their point of view. The presence of a considerable group of such subjects might be sufficient to account for the correlation between the *S-C* and *S-OC* scores.

The correlation between the *S-C* and the *S-OC* scores tends to support our suggestion above. We interpret it to mean that those who perceive large differences between their personal values and College-held values also perceive large differences between the values of the College group and those of their off-campus groups. The converse of this, of course, is that those who perceive their own values as being close to College-held values also perceive the values of their off-campus groups and those of the College community to be compatible.

The correlation between the *S-OC* and *C-OC* scores, however, could also be interpreted to substantiate our earlier speculation concerning projectivity. It seems to say that those who see large differences between their own values and the values of their off-campus associates also see large differences between the College group and their off-campus associates. The fact that this correlation ($r = .47$) is so much larger than that between the *S-C* and the *C-OC* scores ($r = .25$) suggests that many subjects who perceive a gap between the College and off-campus groups feel closer to the College community in relation to their own values.

Consideration of the intercorrelations with the "balance" score (*d*) substantiates the statement made above. The "balance" score was derived in such a fashion that the higher scores would result from relatively greater compatibility between self-held values and College values, coupled with relatively less compatibility between self-held values and the values of off-campus associates. In other words, the closer to College values and the

farther from the values of off-campus associations the individual feels himself to be, the higher his score. We note that the "balance" score *d* does not correlate significantly with the *S-C* scores, despite the fact that they were involved in its derivation. It does, however, correlate significantly with the *S-OC* scores and the *C-OC* scores. These correlations indicate that the greater the gap between our subjects and their off-campus associates, the closer they felt, *comparatively*, to the college. Similarly, the greater the difference they perceived between the new group and their other groups, the closer they felt to the new one.

These data may explain why we did not find our second hypothesis substantiated. If conflict between the values of the new group and previously established groups is associated with preference for the values of the new group, we would expect such conflict to *facilitate*, not inhibit, acceptance of the new group. If, however, this preference operates in only part of our sample, and the inhibition we hypothesized operates in another part of the sample, the operation of both these forces could cancel each other out in correlational terms and result in a zero correlation.

Examination of the correlations occurring between each of the value scores and measures of other variables administered to the same subjects yields further understanding of the meaning of the value measures. All correlations reaching a level of significance above .05 are presented in Table 2.

TABLE 2
SIGNIFICANT CORRELATIONS BETWEEN VALUE-CONGRUITY SCORES AND OTHER MEASURES
(*N* = 146)

Measures	<i>r</i>	<i>p</i>
1. S-C and College need satisfaction ^a	-.22	< .01
2. S-C and College-Off campus need satisfaction balance ^b	-.16	.03
3. S-C and difference-preference for College-Off campus mores ^c	-.17	< .03
4. S-C and generalized satisfaction-dissatisfaction ^d	-.16	< .03
5. S-OC and Off-campus need satisfaction ^e	-.29	< .01
6. S-OC and College-Off campus need satisfaction balance ^b	.25	< .01
7. S-OC and difference-preference for College-Off campus mores ^c	.28	< .01
8. S-OC and preference for College-Off campus mores ^f	.27	< .01
9. C-OC and need importance ^g	.16	< .05

- (a) Gross amount of need satisfaction reported to be provided by the College (5).
 (b) Relative amount of need satisfaction provided by the College as compared with that provided by off-campus groups (5).
 (c) Comparative amount of difference between College and off-campus mores, with preference for College mores (3).
 (d) As measured by attitude toward diverse elements of the culture (4).
 (e) Gross amount of need satisfaction reported to be provided by off-campus groups and associates (5).
 (f) Gross preference for College mores, without reference to degree of difference between College and off-campus groups (3).
 (g) Degree of personal importance assigned by subjects to a list of selected needs (5).

We interpret the findings shown in Table 2 as indicated below. (The numeral designations 1, 2, 3, etc., refer to the data designated by the respective numerals in Table 2.)

1. The smaller the perceived difference between the individual's own values and College values, the higher the degree to which he feels his needs are satisfied by the College, in absolute terms.

2. The smaller the perceived difference between the individual's own values and College values, the greater the *relative* amount of need satisfaction the individual experiences at the College, as compared with the need satisfaction he experiences elsewhere.

3. Those who perceive relatively large differences in values between themselves and the College group tend also to perceive relatively large differences between *mores* at the College and among their off-campus associates, and to prefer the latter. Conversely, those perceiving their own and College-held values as relatively similar, tend also to perceive relatively large differences in *mores* between the College and their own off-campus associates, but to prefer the *mores* characteristic of the College. These data tend to confirm our earlier speculations about the operation of two opposing tendencies in our sample.

4. Those who perceive relatively little difference between their own values and College values tend to show a relatively high degree of generalized satisfaction with reference to a wide variety of elements in our culture—elements ranging from locomotive engine design to relationships between parents and children.

5. Those who perceive relatively great differences between their own values and those characteristic of their off-campus associations tend to derive a relatively small degree of need satisfaction from their off-campus groups.

6. Those who perceive relatively great differences between their own values and those held by their off-campus associates tend also to report a greater balance in favor of the College when the latter is compared with their off-campus groups in terms of need satisfaction.

7, 8. Those who perceive relatively large differences in values between themselves and their off-campus associates also tend to perceive relatively large differences between the *mores* prevalent at the College and those characteristic of their off-campus contacts and tend to prefer the former. This finding is logically consistent with No. 3 above.

9. Those who perceive relatively large differences between the values held by their off-campus associates and by the College community, tend also to assign a relatively high degree of importance to their own needs. Keeping in

mind the complex of inter-relationships in Table 1 and those discussed immediately above, we suggest that this datum may mean that the subjects having contact mainly with groups very different from the College during their time off-campus find little satisfaction for their needs in these groups and are therefore made more aware of these needs through the frustration they experience. Those who assess the College and their off-campus associations as very similar in values held tend to assign a comparatively low degree of importance to their needs ($r = .15$, $p = .05$). This is logically consistent with our suggestion above.

E. SUMMARY

This paper reports the results of an investigation of the relationship between perception of value congruity and acceptance of a new reference group. Subjects were 146 male college freshmen. By means of a ranking technique, scores were obtained showing the relative congruity between subjects' personal values, the values they perceived as characteristic of the new group (the College), and those they perceived as characteristic of their established groups. This technique also yielded scores indicating the relative compatibility in values between the new group and their established groups from the subjects' point of view, and the direction of greater congruence when subjects' values were compared with those they assigned to the new and to their established groups respectively. Results indicated that the greater the compatibility between the values of the individual and the perceived values of the new group, the more likely the individual is to accept the new group as a reference group. Hypotheses concerning conflicts in values between the new and established groups were not supported, but the data suggested that the simultaneous operation of opposing tendencies in our sample might be responsible for the apparent lack of support. Relationships between measures of value congruity and measures of other functions administered to the same sample indicated that the former behaved with logical self-consistency.

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A STUDY OF ORGASM AS A CONDITION OF WOMEN'S ENJOYMENT OF INTERCOURSE*

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A. INTRODUCTION AND PROBLEM

This article presents some empirical evidence on the question of whether orgasm is a necessary condition for women's enjoyment of intercourse.

Many manuals which concern themselves with the sexual instruction of married couples proceed on the assumption that orgasm is essential for women's enjoyment of intercourse. If not explicitly stated, this is implied by their emphasis on the importance of foreplay (e.g., clitoral stimulation by the husband) for purposes of insuring the wife's orgasm. The tendency is to presume that in the absence of orgasm, women who have been sexually aroused are left in an unpleasant state of neuromuscular tension. This point of view is expressed by Kelly (4): "If the woman is not quite apt and does not reach a climax easily she may remain in an unsatisfied state, with a resultant congestion of her generative organs and an unrelieved nervous tension." In a somewhat similar vein Kinsey and his collaborators (5) refer to, "the satisfaction and physiologic release which the female might obtain from complete activity [i.e. orgasm] . . ." Although they assert that, "considerable pleasure may be found in sexual arousal which does not proceed to the point of orgasm," the pleasure alluded to is apparently social and not erotic.

Other observers, however, directly or by implication question the premise that intercourse without orgasm leaves women in a state of unresolved tension and frustration. They consequently affirm the possibility of intercourse being satisfying in the absence of orgasm. For example, Simone de Beauvoir

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¹ This is one of a group of articles reporting the findings of a study dealing with questions relating to the sexual behavior of men and women before and after marriage. I am grateful for support given the study by the Rockefeller Foundation and the Social Science Research Council. The study was also supported in part by a grant from the Committee for Research in Problems of Sex, National Academy of Sciences—National Research Council. I am indebted to Professor Ernest W. Burgess with whom I collaborated on the long-term investigation of engagement and marriage in the course of which the data of the sex study were collected. For their work on various phases of the study, I owe thanks to Fred Chino, Alexander Clark, Jan Howard, and Don Mills.

(1), stressing individual differences among women in their mode of response to coital stimulation, states:

A man is very wrong in undertaking to impose his own rhythm or timing upon his partner and in working furiously to give her an orgasm: he would often succeed only in shattering the form of eroticism she was on the way to experiencing in her special manner. It is a form sufficiently plastic to set its own terms; certain spasms localized in the vagina or in the sexual system as a whole, or involving the entire body, can constitute a resolution; in some women they are strong enough and are produced with sufficient regularity to be regarded as orgasms; but a woman in love can also find in the man's orgasm a conclusion that brings appeasement and satisfaction. *And it is also possible for the erotic state to be quietly resolved in a gradual manner, without abrupt climax (italics mine).*

Ford and Beach (3), subscribing to the latter proposition, note that, "the fact that some women can find intercourse pleasant and satisfying without experiencing any violent climax may be interpreted as reflecting the primary importance of stimulation which evokes a more or less steady physiological response and may totally lack any climatic features."

The question at issue here was first empirically studied by Terman (6) with data obtained from 750 married women. On the basis of his study, he concluded that: "For many women the satisfaction derived from sexual intercourse is largely independent of the climatic response." Terman so concluded from the considerable correlation he found between the responses of the women to the following questions:

(a) In sexual intercourse with your husband, do you experience an orgasm, i.e., a climax of intense feeling followed by quietude and a feeling of relief? (Never, sometimes, usually, always.)

(b) How much release or satisfaction do you usually get from sexual intercourse with your husband? (Entirely, complete, fairly complete, moderately complete, little, none, am left nervous and dissatisfied.)

Terman's conclusion as to the possibility of complete *satisfaction* with intercourse in the absence of orgasm does not follow from his data as unequivocally as his statement would indicate. As he himself realized the question used as a measure of satisfaction was double-barrelled, referring as it did to "release or satisfaction."

B. METHOD

1. *Subjects*

Burgess and Wallin (2) collected data relating to the problem under consideration from the wives who participated in their study of engagement and marriage. This research is reported in detail elsewhere (2). In its first stage it was concerned with a thousand engaged couples. In a follow-up study of the couples who married and could be reached after a few years of marriage, husbands and wives, independently of one another and under supervision, answered questionnaires that yielded the data presented below. This phase of the study was completed in 1946.

The couples were volunteers and received no payment. They were white, native-born, and predominantly residents of metropolitan Chicago. Only one-fifth of the men and about one-third of the women lacked some college education. Somewhat more than half the couples were Protestant, the others being Jewish or Catholic or having no religious affiliation. The average age at marriage was 25.7 for the men and 23.9 for the women. At the time of the follow-up study, about three-fourths of the couples had been married between three and five years. A small percentage had been married under three years, and the marriages of the remainder were of six to nine years duration. Consequently, the findings presented below are for the early years of marriage. (A study of these couples in the middle years of marriage is now in progress.)

2. *Procedure*

Orgasm was defined as by Terman (6) except for the omission of the word "quietude" because of the possibility of its not being understood. Terman's double-barrelled question was modified as follows to focus attention on relief or frustration of sexual desire: How much relief from sexual desire do you usually get from sexual intercourse with your husband?

C. RESULTS

Table 1 presents the cross-tabulation of responses to this question and the reported orgasm-frequency of the women in the Burgess-Wallin study. The data indicate a high positive correlation between orgasm-frequency and the extent to which the women obtain relief from sexual desire. For most of this sample of women complete relief from sexual desire is associated with their having orgasm. There are, however, wives who describe themselves as having orgasm only sometimes or even never, who nonetheless report that they usually experience complete relief. And there are some who rate them-

TABLE 1
FIVE HUNDRED FORTY WIVES CLASSIFIED BY THEIR ORGASM FREQUENCY AND EXTENT OF RELIEF FROM SEXUAL DESIRE*

Extent of relief from sexual desire	Orgasm frequency			
	Never	Sometimes	Usually	Always
Entirely complete	11.1	19.7	70.7	92.8
Fairly complete	18.5	40.2	24.8	4.8
Moderately complete	22.2	27.0	4.5	2.4
Little, none, left nervous and dissatisfied**	48.1	13.1	—	—
Total cases	27	122	266	125

* Some 60 wives have been excluded from the analysis because of not answering any one of the three questions, responses to which are reported in Tables 1, 2, and 3.
** Because of the few wives in any one of these categories, the three categories are here combined.

selves as usually or always having orgasm who they say usually secure less than complete relief. The reports of these two groups of wives support the proposition that orgasm is neither a necessary nor sufficient condition for the relief of women's sexual desire.

Differences between women in the proportion of their coital relationships in which they have orgasm is only a partial description of their response to stimulation. Women who have orgasm differ in the means by which they attain orgasm and in the extent to which they find the means acceptable. They differ, too, in the ease with which they can secure orgasm, some being able to reach it as quickly as they desire, and others having to exert themselves much longer than they prefer. More important perhaps are differences among women in the typical intensity of their orgasm. For some the climax may be almost unbearably intense, for others it may be only moderately so. Future research should take account of all these dimensions when orgasm is being considered as a condition of relief of sexual desire, or more generally as a determinant of enjoyment of intercourse. Differences between women in one or more of these dimensions may explain the women who usually or always have orgasm with less than complete relief.

It will be recalled that the primary problem with which this paper is concerned is whether intercourse without orgasm can be a pleasurable and enjoyable activity. It could be argued that the data of Table 1 do not bear unequivocally on this question and that it remains to be shown that completeness of relief from sexual desire and enjoyment of intercourse are correlated. The objection might even be urged that women whose sexual desire is relieved without orgasm are women who are relatively less aroused in coitus who therefore may be presumed to find intercourse less enjoyable than women who usually do have orgasm.

Fortunately data from the Burgess-Wallin study provided a measure of enjoyment of intercourse which could be correlated in turn with orgasm frequency and relief from desire. The measure was the responses of the wives to the question "How many times per month would you prefer to have intercourse?" This report of preferred frequency of coitus was used as an index of enjoyment of intercourse on the assumption that the greater the enjoyment of an activity, the more frequently it would be preferred. (This assumption will be empirically tested with data now being secured from wives in the middle years of marriage.)

The data of Table 2 indicate that preferred frequency of coitus varies positively and significantly with relief of sexual desire. The association between the former and orgasm-frequency however, while in the expected direction is not statistically significant.

TABLE 2
FIVE HUNDRED FORTY WIVES CLASSIFIED BY PREFERRED MONTHLY FREQUENCY OF INTERCOURSE AND (A) ORGASM FREQUENCY AND (B) USUAL EXTENT OF RELIEF FROM SEXUAL DESIRE

Preferred monthly frequency	Orgasm Frequency			Usual Relief		
	Never or some-times	Usually	Always	Moderate or less	Fairly complete	Complete
Less than 5	30.2	23.8	21.6	34.9	33.3	19.3
5 to 8 times	37.6	39.2	41.6	38.6	31.0	42.6
9 or more	32.2	37.0	36.8	26.5	35.7	38.1
Total cases	149	266	125	83	126	331
		$p > .50$			$.01 > p > .001$	

Table 3 shows how preferred frequency of intercourse varies with relief and orgasm taken together. Ignoring the sub-groups with very few cases, it can be seen that with relief held constant there is relatively little association between orgasm-frequency and preferred frequency of intercourse, and that among women reporting complete relief the association, although far from being statistically significant, is negative rather than positive. Insofar, then, as preferred frequency of intercourse is an index of its enjoyment, the data are consistent with the hypothesis that women who never or only sometimes have orgasm can find intercourse enjoyable providing they secure complete or fairly complete relief from sexual desire.

Finally, a related unpublished finding for the women studied warrants mention since it suggests an interpretation of the relationship between orgasm and relief from sexual desire. The finding is that women at the graduate level of education are significantly less likely than those at a lower

TABLE 3
FIVE HUNDRED FORTY WIVES CLASSIFIED BY PREFERRED MONTHLY FREQUENCY OF INTERCOURSE,
ORGASM FREQUENCY, AND USUAL EXTENT OF RELIEF FROM SEXUAL DESIRE

Preferred monthly frequency of intercourse	Moderate or Less Relief		Fairly Complete Relief		Complete Relief	
	Never or sometimes have orgasm	Usually do	Always do	Never or sometimes have orgasm	Usually do	Always do
Less than 5 times	29%	58%	67%	39%	29%	33%
5 to 8 times	44%	17%	—	29%	33%	17%
9 times or more	27%	25%	33%	32%	38%	50%
Total cases:	68	12	3	54	66	6
				27	188	116

level to report complete relief of sexual desire if they fail to have orgasm. This suggests that the expectation of orgasm may be an important determinant of the extent of enjoyment of intercourse in the absence of orgasm. This could be inferred from the finding on education if it be assumed that the expectation of orgasm in marital coitus is more common among women at higher than at lower educational levels. This is probably a valid assumption since the former are more likely to have encountered the concept of orgasm through reading and, according to the Kinsey Report on women, are more likely to have experienced orgasm directly in premarital masturbation.

D. SUMMARY

Data obtained by questionnaire from a group of 540 wives in the early years of marriage were used to test the hypothesis that orgasm is a condition of women's enjoyment of intercourse. The data were the women's reports of (a) their orgasm frequency, (b) their relief from sexual desire, and (c) their preferred monthly frequency of coitus.

Orgasm frequency was found to be closely associated with the completeness of relief usually experienced in intercourse. Some wives, however, described themselves as having orgasm only sometimes or even never but stated they usually experienced complete relief of sexual desire. Some rated themselves as usually or always having orgasm but as securing less than complete relief.

The wives' reports of their preferred monthly rate of intercourse were significantly associated with the usual completeness of their relief but not with their orgasm frequency.

The findings of the study can be regarded as support for the assumption that, in the universe of wives roughly sampled by the Burgess-Wallin investigation, intercourse without orgasm tends to have some frustration (lack of complete relief of desire) associated with it. But the research is also consistent with the assumption that intercourse can be a satisfying and enjoyable experience despite a usual lack of orgasm.

Finally, an unpublished finding for the wives of the study suggests that whether lack of orgasm is experienced as frustration is in part, at least, socially or culturally determined.

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SOME EFFECTS OF BIAS ON LEARNING*

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A. INTRODUCTION AND STATEMENT OF THE PROBLEM

The relationship of past learning to present or subsequent learning has been a subject of much discussion and many investigations (1). The relationship of previously learned information and habits to subsequent learning not only is of great theoretical interest, but also obviously has many practical implications. Theoretically the issue has come to be known as the *continuity* and *non-continuity* theories of discrimination learning.

Practically it is of great significance in the field of education and teaching. Thus if a subject has learned *biased* answers, it would be anticipated that he would have difficulty in extinguishing the wrong answers for the purpose of subsequently learning the right answers.

It has been my observation that students seem to learn more easily and retain information and answers to statements to which they have initially guessed the answers, than to statements initially answered wrong by errors in reasoning, misinformation, or biased reactions. The implication of this observation is that communication is more effective when an individual has no clear-cut stand on a statement than when he has a biased and/or misinformed stand.

It is a general assumption of psychoanalysis that expectations and attitudes learned in childhood are of great importance to the individual's learning process later on (3). But perhaps these expectations are simply unlearned or replaced by subsequent associations. If one is critical in his thinking he will ask: why assume that what is learned at one time is important for learning at a later time? This, of course, brings us directly to the problem of unlearning and forgetting.

The general consensus among theorists of learning is that forgetting is

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¹ This paper reports on one of the hypotheses of the writer's Ph.D. dissertation in Social Psychology, University of Wisconsin, 1956, entitled "Some Effects of Bias on Learning," which was principally supervised by the late Dr. T. C. McCormick, and finished under the supervision of Dr. William H. Sewell, both at the University of Wisconsin. The writer wishes to acknowledge the able assistance of both Professor McCormick (my major academic mentor), and Professor Sewell.

not due to *disuse*. Instead, it is due to the conditions of interference by new learning, altered stimulus conditions, and inadequate motivation or set at the time of retention measurement (5). Osgood, generalizing regarding concepts of retroactive inhibition and transfer of training, formulated the problem of the effects of previous learning upon subsequent learning in a more specific manner by stating that the amount of transfer in positive or negative directions is a function of changes in similarity between learning and retention of both the stimulus conditions *and* the response required. Further, he says that stimuli bearing no resemblance to those used in original learning lead to new responses without *any* transfer effect, positive or negative. With identical stimuli there will be maximum positive transfer with *identical* responses, whereas with direct *antagonistic* responses there will be maximum interference, for the earlier responses will have to be completely unlearned or extinguished (1). Thus with identical stimuli and antagonistic responses, there will be maximum interference.

Unlearning would most likely occur when the same stimuli give rise to incompatible responses, one of which may then be extinguished by lack of reinforcement. But such an opportunity for unlearning or extinguishing is not so likely to occur when the early experiences are learned under stimulus conditions which are exceedingly generalized and vague. This has the effect of making it more difficult for subjects to achieve the necessary discriminations and differentiations in order to permit the extinction of learned connections. Randomizing reinforcement is one well known experimental way of making discrimination between learning and extinction difficult (2). Much early learning which occurs before the child has developed an adequate symbol system is very generalized and vague. Thus McClelland musters evidence to show that early experiences assume the importance they do because they are not represented by the kinds of symbols, particularly verbal, which facilitate subsequent discrimination and extinction (4). Moreover, the initial or early learning situation may prevent subsequent unlearning because the responses are instrumental to *goals* or ends which are so vague or indeterminate that it is impossible for the person to evaluate how well he is doing. To borrow an example from McClelland: a child may be punished regularly for stealing candy. He knows he will be spanked if he takes it and may learn to inhibit this response. Later on he may try taking candy again and if he goes unspanked will soon extinguish the inhibitory response. At the other extreme, a child may be told if he steals candy that "something bad" will happen to him; God will disapprove. This, too, in time will inhibit his response but now if he breaks through this inhibition at

any time he has no way of knowing accurately whether he is being punished or not. "Something bad" may not happen immediately, but it may later; sins may bring punishment in the next life. In short, responses learned under conditions for the consequences of which the subject has no valid test, are more difficult to extinguish than those which have direct and clear-cut effects. Many folk beliefs and opinions are of this sort.

Finally, a third condition which interferes with unlearning is that in general a subject will tend to accept statements which express ideas and attitudes in harmony with those of his reference groups and reject statements in conflict with these; therefore, any change in a subject's beliefs and attitudes would be related to perceived similar changes in his reference groups. Thus, if a subject has learned biased answers under the three conditions described in the foregoing, it would be anticipated that he would have difficulty in extinguishing the wrong answers for the purpose of subsequently learning the right answers.

Man's symbolic capacity frees him to a certain extent from too great a dependence on external regularities or irregularities by enabling him to produce a kind of personal or internal regularity. However, if the learned connections are formed under very irregular conditions and during a *time* before symbolic control has adequately developed, then the learning conditions are such that it would be difficult for the person ever to discover that the conditions have changed. This should be particularly true of early childhood since it is during this period that symbolic capacities are at a minimum. Thus the Freudian emphasis on the importance of early infancy and childhood in the formation of adult personality would be valid, but for reasons due to conditions of *learning* rather than to Freud's biological *dei ex machina*, such as the instincts of libido and cathexis. One wonders if complete extinction is possible when learning occurs under the foregoing conditions.

Thus the specific problem here is: Does bias interfere with subsequent learning under conditions of positive motivation? The major implication of this question is that extinction will have to occur before new learning can take place, but that bias will interfere with the extinction process.

B. THE ARGUMENT

The research argument of this paper consists in combining two of Osgood's propositions referred to previously with the three conditions discussed in connection with the impeding of the unlearning process. The two Osgood propositions in question are: first, stimuli bearing no resemblance to those used in original learning lead to new responses without *any* transfer effect,

positive or negative. Second, when the subject is presented with stimuli identical with the stimuli used in connection with original learning, but calling for antagonistic responses, there will be a maximum of interference, for the earlier responses will have to be unlearned or extinguished. These propositions can be somewhat simplified by noting that the first one refers to new stimuli about which it is presumed that the subjects have no preconceptions or attitudes. The second refers to stimuli with which the subjects are familiar and to which they also have fixed responses, but the new learning situations call for new and conflicting responses to the old stimuli.

Now, if one assumes that the stimuli referred to in the second proposition are learned under *conditions* which are known to impede unlearning, then, this should further reinforce the interference effect of Osgood's second proposition. Much social-learning occurs under these conditions: group expectancy, vague and general stimuli conditions, and vague and general response validation. Consequently, it was decided that the stimuli used in this experiment which called for conflicting responses should be of the kind which would extend through early childhood and adolescence. This would assure sufficient general acquaintance by the subjects with the stimulus content. Secondly, it was decided that the statements of this type should primarily deal with stereotyped notions of human nature or human behavior, since this is a likely source of existing conceptions which would be in conflict with scientific interpretations of the same statements.

The following are two examples of the antagonistic type of statements used: "Although many Negroes are quite intelligent, the majority of these have 'white blood', and it is the white blood which accounts for this." "Criminals are born, not made, and evidence for this is provided by the fact that many criminals' families have long histories of crime." The following are two examples of the type of statements used in connection with the first proposition, i.e., stimuli which were new to the subject and toward which he would be neutral. "The region of most indistinct vision in the eye is the fovea." "At birth the infant possesses his total quota of muscle cells."

The preceding argument may now be summarized. If a subject has an existing interpretation of a statement, it would seem that in comparison to a statement for which he does not have an existing interpretation the learning of the right answer to the former, in comparison with the latter, would be more difficult as a consequence of the selective structuring of the previously learned interpretation, and the necessity of unlearning the former. Finally, the degree of interference or difficulty of unlearning is related to at least three conditions of previous learning: first, highly generalized stimulus conditions

which handicap the discrimination and differentiation necessary to permit extinction; second, the fact that the goal-directed responses are too indeterminate to permit the subject to evaluate how well he is doing; third, the pressure of the subject's reference groups.

C. THE BASIC RESEARCH DESIGN

For purposes of this study, the existence of bias is inferred from the failure of a subject to change from a wrong response to a statement to a right response, when the subject is provided with full information and reasons regarding the correct response and is motivated to change. In other words, bias is defined as the existence within a subject of an interpretation based on false information and misconceptions, and to which the subject clings in spite of full information and motivation to the contrary. Operationally, bias is defined as $\frac{\Sigma W_{pt}}{N}$, where ΣW_{pt} is the sum of the statements answered wrong on a pretest by a given subject, and N is the total number of statements to be answered. Each statement could be answered in one of three ways: as true, false, or "don't know". "Non-biased" is taken to mean that a subject does not have a preferential response, i.e., he does not know the answer to the statement, and says that he does not know. Operationally defined, "non-biased" is the sum of the "don't know" responses of a subject on a pretest expressed as a proportion of the total number of statements on the pretest. Symbolically this is expressed as $\frac{\Sigma D.K._{pt}}{N}$.

The hypothesis is that subjects will have more difficulty in learning the right answers to statements initially answered wrong than to statements initially answered "don't know." In order to provide motivation for learning the correct responses, one hour's course credit was allowed for each of the 122 members of the freshman class who participated and successfully completed the work.

The general procedure of the study was to give to the 122 college freshmen systematic instruction about a group of statements on which they had given both biased and unbiased answers in a pretest; to withhold instruction on a similar group of statements and then compare the rate of learning of the right answers on statements to which the students had previously given biased answers with the rate of learning of the right answers on the statements to which they had previously given non-biased answers

for both the taught and non-taught groups of statements.² The following table will illustrate the controls used in this experiment.

TABLE 1
ILLUSTRATING RESEARCH CONTROLS

Group of statements	Before (pretest)	After (post-test)	Effect of instruction
Experimental statements (taught statements)	E_1	E_2	$E_1 - E_2 = D_1$
Controlled statements (non-taught statements)	C_1	C_2	$C_1 - C_2 = D_2$

Since the statements assigned to the control group and to the experimental group were assigned by a randomizing process,³ then, if D_1 is significantly different from D_2 the difference is assumed to be the result of the treatment or, in this case, the instruction.⁴ The foregoing control is quite important, since in order to show that bias does or does not interfere with subsequent learning, it is first necessary to show that the subjects had had sufficiently adequate instruction, in both the biased and non-biased areas, to permit successful learning to occur. The appropriate significance-of-difference test resulted in a critical ratio of 3.34 which is significant at $P = .0005$. One can, therefore, conclude that the instruction was adequate, and proceed next to test the primary hypothesis that subjects will have more difficulty in learning the right answers to statements initially answered wrong than to statements initially answered "don't know." That is, where there are

² As a practical necessity for securing course credit for the subjects it was necessary to emphasize the number of taught statements more than the non-taught statements. Thus the N 's for the non-taught group of statements and for the taught group are unequal, being 20 and 60 respectively. Generally speaking the controls would have been established by means of the more convenient use of an experimental group of *subjects* and a control group of *subjects*, but this would have complicated the administrative process of giving credit to the participants, since some would have received instruction and some would not have. Also, it was stated in the discussion of the "Argument" in the preceding section that the subject's performance would be expected to be better when the competing responses were nil, and inferior when there were strong competing responses. In case of wrong answers on the pretest there were competing responses, whereas in the case of the "don't know" responses on the pretest there presumably were no existent competing responses. It could be argued, then, that the placing of the controls on the stimulus material provided a more rigorous test, since the use of the same subjects twice provided a critical opportunity to observe the effects of the two different learning conditions on the same subject. Of course, the statistical design would have to take into account the intercorrelation between the two sets of responses.

³ Tippitt's Tables of random numbers.

⁴ The statements were selected and standardized by use of judges from the Department of Sociology of the University of Wisconsin.

existent competing responses the necessity of extinction will retard learning. The data necessary to test the hypothesis are illustrated by Table 2.

TABLE 2
ILLUSTRATING THE RELATION BETWEEN THE RATE OF LEARNING OF RIGHT ANSWERS ON THE POST-TEST WHICH WERE WRONG ON THE PRETEST TO THE LEARNING OF THE RIGHT ANSWERS ON THE POST-TEST WHICH WERE "DON'T KNOW" ON THE PRETEST

		Right	Pretest Wrong	Don't know	Total
Post-test	Right		$\bar{P}_w = .490$	$\bar{P}_{d.k.} = .562$	
	Wrong				
	Don't know				
	Total				

* The standard error of difference of the above two statistics was .016.

The crucial difference is, of course, the difference between \bar{P}_w and $\bar{P}_{d.k.}$ in the foregoing table, where \bar{P}_w equals

$$\frac{\sum_{i=1}^N \frac{R_i, W_{p.t.}}{W_{p.t.}}}{N}$$

and $\bar{P}_{d.k.}$ equals

$$\frac{\sum_{i=1}^N \frac{R_i, D.K.p.t.}{D.K.p.t.}}{N}$$

That is to say, \bar{P}_w is the mean per cent change of the 122 subjects in terms of the number right on the test of those which were wrong on the pretest divided by the total number wrong on the pretest for each student. And $\bar{P}_{d.k.}$ is the mean per cent change of the 122 subjects in terms of the proportion right on the test of those which were "don't know" on the pretest for each student. The critical ratio for the difference between $\bar{P}_{d.k.}$ and \bar{P}_w for the sample of 122 subjects was 4.50 and is significant at a level of confidence of $P = .0001$.⁵

D. SUMMARY, RESULTS, AND CONCLUSIONS

After having made adequate tests to ensure that the instruction or treatment was effective in providing adequate opportunity for unlearning and relearning, the hypothesis on bias was tested. Specifically this hypothesis

⁵ It should be noted that the factors of interest in the statement by the student and intelligence were controlled by partial beta and partial correlation techniques in respect to the two learning situations of initial wrong answers and initial "don't know" answers.

stated that the subjects would have more difficulty in learning the right answers to statements initially answered wrong than to statements initially answered "don't know." Appropriate statistical analysis confirmed this hypothesis. Consequently, the conclusion is that with identical stimuli, and competing responses, in spite of the positive motivation to acquire the new response, the existence of the preferential initial response significantly interferes with subsequent learning as compared with the "don't know" or neutral response.

The degree of correlation in respect to the relative interference of wrong answers and "don't know" answers to the subsequent learning of right answers was determined by a partial correlation and partial beta analysis. The results were as follows: $r_{01.234} = -.52$ with a level significance of $P < .001$. This meant that when the proportion of wrong answers on the pretest for each student was correlated with the proportion of right answers on the post-test with "don't know" answers, interest in statement, and intelligence held constant that the net correlation was $-.52$. Whereas $r_{02.134} = -.42$ which means that when the proportion of "don't knows" on the pretest for each student was correlated with the proportion of right answers on the post-test for each student with wrong answers, interest in the statement, and intelligence held constant that the amount of interference dropped by a 10 per cent difference in the third-order partial r 's.

The third-order partial betas were $\beta_{01.234} = -.591$, and $\beta_{02.134} = -.468$.⁶ However, to demonstrate that wrong answers on the pretest interfere significantly more than "don't know" answers on the pretest as measured by the degree of correlation of each with right answers on the post-test, it is necessary to show that the two third-order betas or r 's differ significantly from each other.

The critical ratio test for differences between correlation coefficients involves converting the partial r 's to z 's, and if the two sets of scores are highly intercorrelated (as these were to the extent of $-.834$), there is no known valid method for determining the intercorrelation between the z 's (6, 7). However, by transforming the partial r 's to partial betas, the problem of the non-normal distribution of r 's can be avoided, and likewise the unknown intercorrelation between the z 's when the corresponding r 's are from the same sample. This is so since in the case of betas one is dealing directly with the original or initial variabilities, while in the case of partial r one is

⁶ Variable 0 was the per cent of right answers on the test for the students, Variable 1 was the per cent of wrong answers on the pretest, and Variable 2 was the per cent of "don't know" answers on the pretest for the students.

dealing with equalized residual scores around the slope of the line. One can take initial measurements in terms of equal standard deviations, but partial standard deviations exist only theoretically (7).

The critical ratio test for the difference between the two observed partial betas resulted in a critical ratio value of 3.00 which is significant at $P = .001$.

To summarize: it has been shown, first by critical ratio analysis, and secondly by partial correlation and partial beta analysis that the existence of competing preferential responses interferes significantly more with subsequent learning than the existence of neutral or "don't know" responses on a pretest. Thus with wrong responses, extinction and then new learning takes place; with "don't know" responses, only new learning takes place. It is not intended to imply that learning in respect to the "don't know" responses is completely independent of previous learning, while in the case of wrong responses, it is dependent upon previous learning. This would be an oversimplification of the process. It should be recognized that the learning which occurs in connection with the "don't know" type response has to occur within the context of the subject's previously learned general knowledge, powers of discrimination, habits of thought, and his ability to analyze logically. Thus while only new learning takes place in connection with the "don't know" responses, it takes place through the subject's existent neutral content and habits. The crucial point seems to be that in the case of "don't know" responses there are no existent *preconceptions which have reached the level of habitual organization and thus function as automatic-like interpretators which would tend to make the subject unconscious of the need for learning*. But in the case of wrong responses, preconceptions *do* exist, some of which have reached the level of habitual response or automatic behavior and others which have approached this level within varying degrees. These preconceptions and habits tend to order and interpret the data of the stimulus world until changed by extinction and relearning. Once acquired, however, many complex habits seem to remain rather stable until circumstances of life, changed conditions, and crises occur which break up established relations between fixed habits and the stimulus world.

Finally, it is important to note the relation between the basic assumptions made in Section 1 and 2 of this paper, and the types of statements which the subjects answered wrong on the pretest and changed least on the post-test as compared to those statements on which the subjects' answers changed most. First, all the statements in the "least change" category, with the single exception of one rather technical statement, represented cultural stereotypes and folk beliefs. The least change category was defined arbitrarily as those

statements for which only 25 per cent or less of the subjects changed from wrong answers on the pretest to right answers on the post-test. "Most change" was defined as those statements for which 60 per cent or more of the subjects changed from wrong answers on the pretest to right answers on the post-test. *Secondly*, the aforementioned stereotypes without exception represented conceptions in respect to some aspect or aspects of human nature. This result is extremely interesting because the conditions under which conceptions regarding human nature are generally learned are quite similar to the conditions which we have assumed to interfere most with the extinction process.

Shifting now to the category of most change from wrong answers on the pretest to right answers on the test, one is impressed with the simple factual characteristic of each. The following is an example of one of the "most change" type statements: "The centers on the left side of the brain control the left side of the body." The ideas contained in this type of statement are ideas which are normally not contained in the folk culture, but instead have emerged from technical sources. They have the power of the authority of the "expert" to bolster them. And finally, the statements which comprise the "most change" category seem to be less complex than the ones of the "least change" category. That is, the answers to the former generally involve fewer assumptions and ideas in their derivation. This should facilitate unlearning in preparation for relearning, since it involves fewer competitive ideas.

Thus the qualitative analysis bears out the quantitative conclusions, that the existence of competitive responses operates to interfere with subsequent learning when a subject is presented with familiar stimuli which call for an antagonistic response. In fact, the existence of the preferential responses tends to make the subject unconscious of the need for relearning as evidenced by the fact that there was no correlation between interest in learning the answers to statements answered wrong on the pretest, while there was a correlation significant at $P = .05$ in respect to interest in the statements marked "don't know" on the pretest.

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RORSCHACH RESPONSES OF HINDUS AND BHILS*

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A. INTRODUCTION

The Rorschach Test has been in general use in the fields of psychiatric personality diagnosis and child therapy, for over a quarter of a century. It has acquired a considerable body of literature on the theoretical aspects of its interpretation and use as a clinical procedure. The bulk of this literature is naturally concerned with its use with subjects living in Europe and America. For a number of years there have appeared a few reports of the test's being used with subjects of a non-European racial and cultural background. The first of these, by Bleuler and Bleuler (1935), concerned its use with Moroccan natives. Since then it has been used in America to illustrate personality differences between Jew and Gentile groups living in adjacent areas (Frenkel-Brunswick and Sanford, 1945); and similarly with negro and white youths (Stainbrook and Siegel, 1944; and Hunter, 1937); and as an adjunct to the understanding of communities which were being studied from the point of view of social anthropology—in Samoa (Cook, 1942); in the island of Alor, in the East Indies (Du Bois, 1944); in American Indian tribes (Hallowell, 1940, 1941, 1942, 1945); and in South American Indians (Schachtel and Henry, 1942).

So far, it has been shown clearly that the test can be applied to non-European communities, and that the responses obtained can be scored and interpreted along the lines of the general European-American theory. Even if the test were known to be valid for Western subjects, it would not necessarily follow that the Western criteria of interpretation to the responses given to the test could be used.

An additional difficulty has been the fact that in most instances of its use in non-Western cultures the test has been both administered and scored by a field worker whose interpretations of the subjects' responses might be influenced by his possessing a good deal of extraneous information about them. This could not be held against the study of the 37 protocols which Cora Du Bois brought back from Alor, whose interpretation (carried out "blind"

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by Dr. Oberholzer) confirmed a number of the generalizations which the anthropologist had made on the basis of her observations of the islanders.

It cannot, however, be said that the validity of the Rorschach has yet been established as a personality-diagnostic instrument which can be used with confidence in non-Western cultures. Until this has been done, anthropological field workers will naturally be reluctant to invest the considerable amount of time and effort required to administer the test systematically to their informants.

A pre-requisite for validation of the Rorschach is the existence of some independent criterion against which its findings can be measured. In the present study Rorschach tests were obtained from men belonging to two village communities in Northern India, communities which showed a number of very marked contrasts in child-rearing, in relationships within the family, and whose expression was approved and encouraged among their adult members. It was assumed that in obedience to these different social pressures, certain contrasting personality traits would be more fully developed in members of each group; and the analysis of their Rorschach protocols was accordingly designed to show whether these, when interpreted blind, provided an efficient means of identifying the members of the respective groups.

B. CHARACTERISTICS OF THE TWO GROUPS

The protocols were obtained by one of the authors (G. M. Carstairs) during an anthropological field study carried out in two villages in the Udaipur Division of Rajasthan in 1951-52. The characteristics common to members of each of these communities have been discussed at length in a monograph (Carstairs, 1957) but some of the salient features can be briefly indicated.

Forty-one tests were completed with men belonging to three high-caste Hindu communities living in a large, long-established village some 20 miles from the city of Udaipur. In the family life of these Hindu villagers two striking patterns were the prolonged and very indulgent care which infants received from their mothers, succeeded, after a permissive toilet training and a delayed weaning, by an arduous process of socialisation in which many restrictions had to be accepted. Fathers, in this community, were not readily able to express tender feelings towards their children or their wives; as the child grew up deference to patriarchal authority was very strongly emphasised. Self-control, restraint in the expression of emotions was judged very important: to give vent to emotion in the presence of one's elders was especially strongly disapproved. This was true of such emotions as anger, mirth, or sor-

row, but still more so of expressions of affection between the sexes. In their ideal norms of behaviour self-control, formality, and conformity to paternal authority took pride of place; spontaneity was relatively discouraged.

Twenty-two Rorschach protocols were obtained from men of the Bhil tribe, a non-literate people living in bamboo huts in the jungles of the Aravli Hills some 40 miles to the West of Udaipur city. This is a hunting, thieving, and fighting people, in which every male member carries a weapon—and a flute. They present many striking contrasts to the former group. For example, they prize spontaneity especially in composing music and songs, and in dancing. They readily give expression to their emotions of rage, fear, sorrow, or affection. A characteristic which particularly shocks the high-caste Hindu observer is that Bhil men and women openly display their fondness for each other—walking side by side, holding hands, even smiling at one another. There are sharp contrasts also in their family relationships: Bhil children are less constantly attended by their mothers, their relations with both parents are less formal and more spontaneous—for example the father's authority is not absolute; but dependent on goodwill. When a son grows up he may, if he falls out with his father, either assert his independence by force or else run away from home.

Two of the 63 tests were administered almost entirely in English to the two highly educated Hindu respondents. The remainder were administered in Hindustani, the *lingua franca* of the region with interpolations in the Mewari and Bhil dialects which were used by the respective groups. The protocols were translated into English by the anthropologist, and have been published on microcards (Kaplan, 1956).

C. DESIGN OF THE ANALYSIS

The analysis of the 63 protocols was carried out in the following stages:

Stage 1 The anthropologist deleted from the schedules any extraneous details which might identify the group from which the subject came. He then allocated serial numbers to the protocols by a random process.

Stage 2 Scoring of the responses was carried out by R. W. Payne, using Klopfer and Kelly's scoring method.

Stage 3 Each protocol was interpreted and a diagnostic personality sketch drawn up, by Mrs. Whittaker and R. W. Payne, working independently.

Stage 4 The anthropologist now prepared a list of 18 traits which, he believed, might differentiate members of the two groups. These traits were selected on the basis of a reading of the Rorschach literature. At this stage the psychologists were not informed which traits were associated with either

group, but they were consulted about the indices in the Rorschach responses which would be taken as criteria for the presence of each trait. These traits and criteria are shown in Table 1.

Stage 5 Each psychologist now assessed each protocol for the presence of these 18 traits, using a five-point scale.

Stage 6 The protocols were re-scrutinised by R. W. Payne and scores obtained for the Rorschach indices designated as likely to discriminate between the groups.

Stage 7 The anthropologist now gave the following information to the psychologists:

Members of Group O will display abundant creative impulses, give free expression to emotions, and show ready acceptance of sexual experience. They have a relatively high capacity for empathy, are relatively independent of emotional support, relish sensual experience, readily establish close personal relationships, and are more interested in practical concerns than in theorising. They show relatively sturdy ego formation and a low level of general anxiety. They are less inclined to be pre-occupied by paranoid phantasies and show little anxiety concerning bodily functions. They display relatively high degrees of reality testing. They are little given to introspection. They readily give expression to impulses. Since all of these characteristics have been selected as distinguishing between the two groups, members of Group I show the opposite traits to those described above.

On the basis of this information, the psychologists were asked to allocate each protocol to one or other group. It has to be noted here that R. W. Payne, who was largely responsible for this design, knew that the protocols came from a tribal group and from a relatively more sophisticated Indian community, and that the latter outnumbered the former by two to one. Mrs. Whittaker knew that the anthropologist had worked in these two types of community; she knew that the groups were unequally represented, but did not know which contributed the larger number of protocols.

Stage 8 In order to obviate the possibility that the allocations were still influenced by extraneous clues conveyed by the content of individual responses the aid of a third psychologist (James Inglis) was enlisted.¹ He was told that the protocols came from two unequal groups, distinguished by the characteristics indicated in the previous stage, and he was given only the two sets of diagnostic personality sketches prepared by Payne and Mrs. Whittaker. Using each set in turn, he allocated each respondent to Group O or Group I.

Stage 9 The scored protocols, but not the diagnostic summaries, together

¹ The authors would like to thank Dr. James Inglis for his help in this study.

with the descriptions given above were now submitted to a fourth rater (D. R. Buckle)² who has had many years' clinical and research experience with the Rorschach. He was asked to read the protocols through, spending not more than 10 minutes over each one, and then to assign them to Group O or Group I. This restriction of time was not arbitrary, but was intended as a test of the suggestion advanced by Kelly and Fiske (1951) that there is an inverse relationship between the amount of time spent by a psychologist in assessing the protocols, and the validity of his assessment. Dr. Buckle was able to read through all the protocols twice and complete his allocations in a total of two and a quarter hours.

Stage 10 The degree of accuracy of each of these indicators (Psychologists' global allocations; psychologists' ratings of supposedly discriminating traits; raw scores of supposedly discriminating traits) in identifying the groups from which the protocols were obtained was calculated, in terms of four-point correlations to criterion for the allocations to groups, and variance ratio tests of significance for the trait ratings and raw scores.

D. RESULTS

1. *Allocation of Protocols to Groups O and I*

The allocations to Groups O (Bhils) and I (Hindus) by the four psychologists are shown in Table 1.

Certain positive and negative findings are apparent. (a) The psychologist who possessed more information than the rest (*viz.*, that one group was more sophisticated than, and twice as large as, the other) was able to allocate the protocols with the highest degree of accuracy. (b) Only Payne's allocations, and those made by Inglis, using Payne's summaries, were significantly better than chance. (c) Every rater made more misclassifications of protocols from Group O than from Group I. The difference was significant in every instance except that of Payne's global allocations. This tendency was accentuated when allocations were made on the basis of the diagnostic summaries, instead of using the original protocols. (d) The allocations made by Buckle after a rapid inspection of the protocols were more accurate than those made by Whittaker, but less so than those made by Inglis, using Whittaker's summaries: none of these were significantly better than chance.

2. *Discriminating Efficiency of Traits as Rated by Interpreters*

Table 2 shows the 18 hypothetically discriminating traits, for which each protocol was rated by each interpreter on a 5-point scale.

² The authors would like to thank Dr. D. R. Buckle for his help in this study.

As can be seen from Table 2, Payne's ratings of these characteristics were such as to differentiate the groups significantly better than chance in respect of 10 of the traits; Whittaker's ratings differentiated the groups better than chance in respect of five traits (Nos. 8, 13, and 14 proved efficient discriminators, as rated by both interpreters).

TABLE 1
BLIND ALLOCATIONS OF PROTOCOLS AND DIAGNOSTIC SUMMARIES TO GROUPS 0 AND 1
BY FOUR RATERS

Allocations made by	Misclassifications Group 1 (N = 41)	Misclassifications Group 0 (N = 22)	Four-point correlation with criterion	P	Preponderance of misclassification of Group 0 P
Payne	9	6	.495	< .001	N.S.
Whittaker	17	18	-.236	N.S.	< .01
Inglis (using Payne's diagnostic summaries)	5	11	.414	< .01	< .001
Inglis (using Whittaker's diagnostic summaries)	4	18	.121	N.S.	< .001
Buckle (brief inspection)	12	13	.118	N.S.	< .05

3. Discriminating Power of Rorschach Item Scores

In the above assessment of supposedly distinguishing traits the raters were guided by agreed Rorschach criteria, but their ratings were still in part subjectively determined. The distribution of the actual item scores was next analysed, in order to show (wherever the scores lent themselves to additive treatment) whether these scores were significantly different in the two groups. The results of this analysis are shown in Table 3.

In addition to the Rorschach criteria listed in connection with the distinguishing traits two other scores were included in this analysis, namely the total responses, and percentage of Animal responses. These items were added at Payne's suggestion: at this stage of the project, he was concerned lest his knowledge that one was a tribal and one a settled village group was causing him to be influenced by extraneous criteria—specifically, by a bias towards assigning the protocols with more numerous responses to Group I and those with many animal responses to Group O. In fact, however, neither of these biases was apparent; nor were any of the Rorschach item scores, with the

exception of F-% and Anatomy responses, significantly differently represented in the two groups.

TABLE 2
TRAITS WHICH HYPOTHETICALLY SHOULD DIFFERENTIATE THE TWO GROUPS,
WITH DISCRIMINATING POWER OF INTERPRETER'S FIVE-POINT RATINGS OF THESE TRAITS

Traits	Rorschach criteria	Discriminating power of Payne's rating	Discriminating power of Whittaker's rating
1. Emotional constriction	F%, M < 2, Sum C	NS	NS
2. Abundance of creative impulses	High M	NS	NS
3. Marked Inhibition of Sexuality	Sex R, Low FM	< .01	NS
4. Dependency	High FM/M, cF	NS	NS
5. High degree of empathy	Fc	NS	NS
6. Abhorrence of dirt	Content	< .05	NS
7. Inhibition of emotional expression	Sum, C, Low colour score	< .01	NS
8. Relish for sensual experience	cF	< .05	< .05
9. Difficulty in establishing close personal relationships	Low FC	< .01	NS
10. More interested in practical concerns than in theorising	D%, Low W	< .01	NS
11. Attempt at strong ego formation fails, ego defences crumbling	F - %	(nearly reaches .05 level)	NS
12. Level of general anxiety	K, KF, k and kF	< .01	NS
13. Paranoid: preoccupied with threatening phantasies	Content; unbalanced M	< .05	< .05
14. Anxiety concerning bodily functions	Anat.	< .01	< .01
15. Given to introspection	FK	< .05	(nearly reaches .05 level)
16. Reality testing defective	F - %	NS	< .01
17. Inhibition of aggression	de, di, dd & ddd	NS	< .05
18. Awe of father-figures	Content	NS	NS

E. DISCUSSION AND CONCLUSIONS

The most striking finding is that of 19 more or less objective Rorschach scores and indices selected as being related to the traits which differentiate the two groups, only two attained statistical significance, one at the 1 per cent, and one at the 5 per cent level. These were the F-% (the Bhil group producing proportionally more F-responses) and the Anat % (the Bhil group producing

fewer anatomical responses). Both differences could be attributed to the relative lack of education among the Bhils (who presumably know very little internal anatomy). However, one difference significant at the 5 per cent level is to be expected by chance when 19 differences are examined, and it would be incorrect to assume that either of these differences are not the result of chance without a further cross validating study. We must therefore conclude that it was not possible to demonstrate more than chance differences between the two groups in the objective scores and indices. This negative

TABLE 3
CAPACITY OF RORSCHACH ITEM SCORES TO DISCRIMINATE BETWEEN PROTOCOLS
FROM MEMBERS OF THE TWO GROUPS

Rorschach item score	Mean standard variance	F	P
D %	232.48	3.0637	N.S.
W %	281.20	.0341	N.S.
Sum dd, ddd, di, de	8.997	.5725	N.S.
F %	196.40	1.6652	N.S.
F - %	684.63	9.1022	< .01
M	11.86	.1849	N.S.
FM	7.95	.7680	N.S.
FC	1.47	.0390	N.S.
Fc	1.04	2.2815	N.S.
cF	.13	1.1005	N.S.
Sum K, KF	.23	1.8440	N.S.
FK	.02	.5313	N.S.
Sum k, KF	.40	.5328	N.S.
Fk	.71	2.3562	N.S.
Anat.	11.38	5.6632	< .05
Sex responses	.62	.0042	N.S.
R (total responses)	366.25	3.1353	N.S.
A %	558.96	.0649	N.S.
Sum K, KF, k, kF	0.7621	1.6094	N.S.

finding is ambiguous. It is possible that the two groups do not differ with respect to these personality characteristics. However, this seems unlikely, in view of the evidence presented elsewhere (Carstairs, 1957). Alternatively it is possible that for these subjects, these particular Rorschach variables are not valid measures of the traits which differentiate the groups. This alternative appears more likely.

It is interesting, in view of this finding, that Payne was able to allocate the subjects to the two groups on the basis of his Rorschach interpretations more correctly than could be expected by chance, and that Inglis was also able to sort out the groups (at a lower level of significance) on the basis of Payne's "blind" personality descriptions. Further, of the 18 trait ratings made by Payne, 10 produced significant differences between the groups at

beyond the 5 per cent level. These results are of course entirely compatible. Since the groups were described to the psychologists merely in terms of these 18 traits, it is clear that anyone who allocated the protocols to the correct group must necessarily have tended to rate these traits correctly.

It is clear that the objective Rorschach scores examined could not have been the basis either of this correct allocation, or of the correct trait rating, since these scores do *not* differentiate the groups. It is likely, therefore, that Payne was influenced by some other aspects of the Rorschach protocols. It has already been pointed out that Payne was in possession of one important piece of information not given to Mrs. Whittaker or Buckle, namely that one group was more sophisticated and better educated and that the unsophisticated group was in the minority. This could easily account for the differences between these raters. The only statistically significant results were obtained by the psychologist with this extra information. Thus it seems likely that this factor alone could account for all the positive results obtained. It was shown that Payne could not have judged degree of education and sophistication from the total number of responses, or the A%, since the groups did not differ significantly in these respects. (Although Payne believed that this was how he had judged them before these differences were examined.) Nevertheless it is still possible that, knowing that education was an important factor from the outset, Payne was able to judge this from other aspects of the protocol (e.g., the way the responses were elaborated, the familiarity with technical concepts, and so on). This assessment of "sophistication" would be reflected in the personality sketches sorted by Inglis, and could have accounted for his success at sorting them. This could also have biased Payne's trait ratings, in that this overall impression of sophistication could have coloured his entire assessment of this majority group.

An alternative hypothesis is that the degree of success at differentiating the groups on the "blind" Rorschach interpretation was a function of the clinical experience with the Rorschach of the psychologists concerned. However, there seems to be no way of testing this alternative hypothesis adequately.

These conclusions are at best tentative, and they illustrate one difficulty in using tests of this sort. When a "global" subjective assessment is used, it is always difficult to discover what factors were the real basis for this assessment, and as in the present study, even the individual who has made the assessment can be wrong, or uncertain about the way it was done.

It would be fair to conclude that there is no positive evidence that the Rorschach *per se* had anything to do with those significant differences which

were obtained. This study has therefore produced no evidence that the Rorschach technique is especially useful in anthropological studies of this type.

F. SUMMARY

1. The Rorschach test was given to two strikingly different Indian groups, 41 high-caste urban Hindus, and 22 jungle-dwelling, illiterate Bhil tribesmen. The numerous differences in their pattern of upbringing, behaviour, and personality have been described in detail elsewhere (Carstairs, 1957).

2. All identifying clues were removed from the Rorschach records obtained, which were then scored according to Klopfer and Kelley's system.

3. Two psychologists then independently, and on a "blind" basis, wrote out a personality interpretation for each record. The same psychologists next rated each subject for 18 personality traits on a 5-point scale. These traits were described by the anthropologist.

4. The two psychologists were finally asked to sort the protocols into two groups, having been given a personality description of each group in terms of the 18 traits.

5. A third psychologist was asked to sort the two sets of "blind" personality assessment into the two groups, defined for him in terms of the 18 traits.

6. A further psychologist was given the entire set of scored Rorschach protocols, but not the personality sketches or ratings. He was asked to sort them out into the two groups (defined by the 18 traits) on the basis of an extremely brief Rorschach interpretation.

7. Of all the sortings performed, only two achieved statistical significance. One psychologist was able to identify the groups significantly, and the groups could also be sorted more accurately than chance merely on the basis of his "blind" personality assessments.

8. Nineteen objective Rorschach scores which, according to Rorschach theory should differentiate the groups, were then examined. One score differentiated at the 5 per cent and one at the 1 per cent level. It was concluded that these differences could have been obtained by chance.

9. It was pointed out that the psychologist whose interpretations had enabled the groups to be sorted significantly was in possession of more information than the other psychologists. He knew that one was a primitive, unsophisticated group, while the other was better educated. It was concluded that he may have based his sorting, personality sketches, and ratings partly on an impression of educational level derived from the type of verbalization used. Since the objective scores had not yielded positive results, and since the uninformed psychologists had not similarly succeeded, it was concluded

that in this study, there was no evidence that the Rorschach test *per se* had anything to do with the few significant differences obtained.

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MORAL CODES OF AMERICAN AND FOREIGN ACADEMIC INTELLECTUALS IN AN AMERICAN UNIVERSITY*

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A. INTRODUCTION

With the advent of the Atomic Age the increased effort of society to recruit the intellectual to assume greater public responsibility and positions of leadership gives rise to increased concern about his view of himself and society. However, the position of the academic person in American society is highly ambiguous. The specialized knowledge and skill of the academic intellectual place him in a position of prestige which often exceeds that of many occupations and specialties. The professional opinions the academic intellectuals express in certain areas are actively sought by the society of which he is a member. Perhaps at no previous time in history has the demand for some of the scientific and professional opinions of the academic person been as great as today.

On the other hand, the specialized interest and knowledge of the academic person place him in a position of isolation from the rest of his community. He is considered to be "different" and is judged to be untrustworthy in matters of common sense. He is not regarded as an authority qualified to pronounce moral value judgments. The latter is reflected, in part, by the image the academic person has of himself (1). The scientific ideals of objectivity and detachment would appear to leave little room for moral value judgments, at least insofar as professional and scientific activity is concerned. Nevertheless, the academic person, being a product of his culture, has incorporated many of its moral values and norms.

Recent discussion and research have focused upon the intellectual's perception of his position in American society (4, 5, 10). He was found with strong feelings of powerlessness and social isolation. The intellectual's status orientation is described as marginal and one which is typical of any minority group. Among the various minority group attitudes identified, that of 'the approval of conformity' is of special interest in this discussion. This attitude is a 'denial of any significant observable differences' between the self and the

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'general public.' This attitude, in the long run, presumably leads to assimilation (10).

The marginal position of foreign academic intellectuals, especially Far Eastern intellectuals studying in the United States, may be similar to that of Americans. These foreign intellectuals are a selected group of persons who, for various reasons, may not be strongly attached to their home country and who thus may be rejective of the moral norms of their own society. On the other hand, many of these foreign intellectuals perceive themselves and are perceived by the American public to be representatives of their own country. Hence, these persons are forced into a position of having to play an ambassadorial rôle, advocating the values and norms of their home country. The result of the latter position may be that the foreign academic intellectual might demonstrate greater adherence to the moral norms of his home society because of his sojourn in the United States than had he resided at home (11, 12).

A question of particular interest is the relationship between the morally marginal standing of the foreign intellectual in his home country and the degree of adoption of perceived American moral norms. Does the rejection of perceived home norms bring the foreign intellectual closer to the moral norms he believes the American public to hold or does this rejection indicate a generalized tendency of moral non-conformity? If the latter conjecture is correct then the foreign intellectual who deviates from the perceived moral norms of his own country will also tend to deviate from perceived American moral norms. Furthermore, should such a generalized tendency of moral non-conformity exist, what is the relationship between such tendency and such variables as length of stay in the United States, age, marital status, sex, religious service attendance, and rural-urban background of the foreign intellectual.

This report addresses itself to three separate yet interrelated problems: (a) how do the moral norms of two national groups of Far Eastern academic intellectuals, who are studying at an American University, compare with those of an American group of academic intellectuals at the same University; (b) how marginal are the moral positions of these three groups, using perceived home public norms as a point of reference; and (c) to what extent do the foreign intellectuals deviate from the perceived moral norms of the *American public*; and what is the relationship between such deviation and similar deviation from perceived *home public* norms, length of stay in the United States, rural-urban background, sex, age, marital status, and religious service attendance of the foreign intellectuals.

B. PROCEDURE

1. *Subjects*

Interviews were conducted with four separate groups of subjects, a group of American scientists and students, and three groups of foreign intellectuals and students. The 41 American subjects all came from one research institute which engages scientists and students representing a variety of scientific orientations including physics, chemistry, biology, and psychology. The ages of the American subjects ranged from 22 years to 57 years with a median of 29.5 years. Sixty-eight per cent were males, the rest females.

The foreign samples consisted of a group of all the Indian ($N = 78$) and a group of all the Korean scientists and students ($N = 40$) at the Ohio State University. The groups also included a group of 47 foreign intellectuals with various nationalities. Of this group of mixed foreign subjects, nine came from China; four each from Guam, Thailand, Iraq, and Egypt; three each from the Philippines, Japan, and Greece; two each from Ceylon, Pakistan, Lebanon, and Chile; and one each from British Guiana, Ethiopia, Jamaica, Macao, and Jordan. The group of mixed foreign subjects is included merely for certain comparative purposes. This group can not be equated with any of the other groups because of its great within-group cultural diversity. The ages of the foreign subjects ranged from 18 years to 46 years with a median of 27 years. Of the foreign groups, 90 per cent, 70 per cent, and 64 per cent were males in the Indian, Korean, and mixed foreign group respectively. The Indian group had a significantly higher percentage of males than the rest of the samples. The bias thus introduced should make for a lesser severity in judgments of moral issues among Indians since females have been found to judge moral issues generally more severely (2, 3). However, as will be seen later (Tables 3 and 4) despite this bias, the reverse is true, the Indians demonstrating consistently severer judgments.

Table 1 presents the distribution of the four groups according to education completed. As can be observed, 74 per cent of the American subjects, 95

TABLE 1
FREQUENCY DISTRIBUTION ACCORDING TO NATIONALITY AND EDUCATION
COMPLETED, IN PER CENT*

Nationality	High School	College	Graduate School
United States ($N = 41$)	17	30	44
India ($N = 78$)	04	42	53
Korea ($N = 40$)	22	35	40
Mixed ($N = 47$)	09	40	51

* The distribution does not always reach 100 per cent because of omission of 'don't know' and 'none' responses.

per cent of the Indian subjects, 75 per cent of the Korean subjects, and 91 per cent of the mixed group have completed their undergraduate training. Differences in this distribution do not quite reach statistical significance (Chi-square = 12.187, df , 6, $p > .05$). Hence, the groups are comparable insofar as education is concerned. In order to obtain a gross estimate of the comparability of the socioeconomic status of the various groups, the occupations of the fathers were divided into blue and white collar workers (Table 2).

TABLE 2
PARENTAL OCCUPATION (IN PER CENT)

Sample	Blue Collar	White Collar
United States ($N = 41$)	32	61
India ($N = 78$)	24	74
Korea ($N = 40$)	08	78
Mixed ($N = 47$)	17	62

Again the differences in the distribution fail to reach statistical significance (Chi-square = 6.691, df , 3, $p > .05$). Hence, it can be assumed that there are no statistically significant differences in the socioeconomic background of the various subjects.

2. Judgments

The judgments were secured with a modified form of the magnetic board (7). This technique includes a thin steel board on which a scale is drawn, and a set of 35 pointed labels, each fastened to a small magnet. The labels, each of which refers to a morally prohibited activity, e.g., suicide, are pointed on both ends so that they can be placed on either side of the scale. The scale was labeled at three points. The top point was labeled 'most offensive behavior you can think of,' the middle point was labeled 'neither offensive nor desirable behavior,' and the bottom point was labeled 'most desirable behavior you can think of.' A measuring rod, numbered from -100 through 0 to 100 was superimposed upon the scale, after the placement of the moral prohibition labels by the subjects, in such a manner that the end and midpoints of the rod coincided with the three labeled points of the scale. Not exposing the subjects to a numerical scale during the judgments eliminated number preference response sets, which might vary from culture to culture (9). Each subject, with the exception of the Americans, placed the 35 moral prohibition labels thrice, once as he thought the 'general public' in his own country would judge them, once as he thought the 'general public' in the United States would rate them, and once as he himself perceived them. The Americans judged the prohibitions only twice using as frames of reference himself and

the United States 'general public.' Each subject was seen individually by an interviewer from the same country as the subjects, except in the case of the mixed foreign group, all of whom were interviewed by a female Korean graduate student. The entire interview was conducted in English, but standard translations were supplied when necessary.

C. RESULTS

In the inspection of the results, two statistically separate aspects must be considered. One aspect pertains to the comparative *severity* of judgments, the other to the comparative *hierarchical* arrangement of the moral prohibitions. The comparative severity of judgment is measured by an F-test of each item separately, or by the Mann-Whitney U-test for over-all severity. The comparative hierarchical ordering is tested by the rank order correlation.

1. *The Moral Codes of American and Foreign Intellectuals*

Table 3 presents the mean 'self' ratings of the offensiveness of the 35 prohibited activities by the various groups. In general, the Indians (and the mixed foreign intellectuals) are most severe in their 'self' judgments. The Americans and Koreans are considerably less severe. Of the 35 'self' judgments, 25 differ significantly in severity among the four groups. On only three items—war, censorship, and racial intermarriage—do the Americans judge more severely than the other groups. War and censorship can be classified under collective morality. Collective morality could be defined as any action in which the responsibility for the action cannot be ascribed to an individual actor, nor is the recipient of the action a single individual. Furthermore, the significant aspect of these collective moral items is that these are actions which are carried out in an institutionalized manner by society, which the other items are not. Each action, however, carries certain objectionable features which are emphasized by the intellectual. On both these items the Koreans, who judge very similarly to the Americans in most other items, judge least severely. Racial intermarriage is mildly condemned by the Americans but is judged quite desirable by all other samples. The rank order correlations of the 'self' judgments range from .81 between the Americans and the Indians to .91 between the Koreans and Indians. These high intercorrelations in the 'self' judgments indicate a significant similarity in the hierarchical placement of the moral judgments.

In general, then, it can be stated that there are significant differences in the severity of moral judgments among the various groups. With some exceptions, the Indians judge most severely while the Americans judge least

TABLE 3
MEAN MORAL VALUE JUDGMENT OF SELF AND GENERAL PUBLIC AT HOME BY VARIOUS SAMPLES

Items	U.S. ($N=41$)		Indian ($N=78$)		Korean ($N=40$)		Mixed Foreign ($N=47$)	
	Self	Gen. publ. U.S.A.	Self	Gen. publ. India	Self	Gen. publ. Korea	Self	Gen. publ. Home
Intentional Murder	80	80	83	85	77	76	83	79
Rape*	67	77	82	84	69	74	76	77
Incest*	62	78	86	89	72	80	69	76
Lynching	76	59	76	72	64	62	77	69
Treason	71	78	75	71	61	66	70	67
War*	77	54	69	71	52	35	69	61
Rejection of Child*	45	36	66	66	56	44	60	54
Adultery*	34	51	66	75	63	65	61	69
Stealing*	45	34	62	55	55	46	56	51
Rejection of Parents*	31	27	60	67	65	66	57	64
Graft, Bribery*	46	26	60	45	41	28	60	48
Bigamy*	43	43	45	41	60	40	58	47
Segregation*	36	— 08 ^a	59	35	36	12	57	32
Homosexuality*	33	67	62	66	35	35	53	53
Deception*	28	05	56	47	49	36	50	25
Illegitimate Offspring*	29	44	55	71	41	42	50	55
Physical Violence	48	27	49	46	34	26	44	36
Prostitution*	30	49	42	55	43	51	53	56
Suicide*	29	36	48	57	24	15	49	46
Drug Addiction	37	47	36	32	35	31	44	46
Revenge	31	06	41	27	23	07	39	23
Premarital Intercourse*	18	23	46	70	26	38	37	59
Alcoholism*	26	29	39	44	29	20	40	36
Cowardice*	22	15	40	32	12	03	28	23
Masturbation*	13	32	33	49	09	07	31	39
Jealousy*	16	— 02	39	32	— 03	— 09	13	06
Divorce	16	03	21	50	12	19	27	34
Atheism	09	33	24	51	13	— 10	19	33
Mercy Killing*	06	23	10	28	13	13	36	38
Insanity	09	27	14	12	13	04	18	18

* Indicates significant differences in 'self' judgments by various samples, as measured by the F-test.

^a Minus sign indicates desirability.

^b Tested by the Mann-Whitney U-test.

TABLE 3 (continued)

Items	U.S. (N=41)		Indian (N=78)		Korean (N=40)		Mixed Foreign (N=47)	
	Self	Gen. publ. U.S.A.	Self	Gen. publ. India	Self	Gen. publ. Korea	Self	Gen. publ. Home
Censorship*	34	-03	-01	15	-02	-20	12	02
Petting*	-28	-27	-02	39	07	26	09	24
Racial Intermarriage*	13	49	-37	20	-11	21	-23	-08
Birth Control*	-35	-22	-49	-01	-34	-18	-21	08
Dancing	-51	-64	-35	06	-36	-24	-49	-34
Average mean judgment	30	29	41	49	31	29	40	41
P-Values ^b	.96		.50		.74			.72
Rho	.65		.85		.91			.88

severely. However, the rank order of the various moral prohibitions is quite stable, varying little with the nationality of the judge.

2. *The 'Home Public' Norms and Marginality*

Table 3 also shows the severity and hierarchy of judgments with the 'general public' of the *home country* as reference group. The rank order correlations between the 'self' judgments and the judgments pertaining to the 'general public' at home in each separate sample range from .65 for the Americans to .91 for the Korean subjects, again indicating significant similarity in the rank order of the prohibitions. Furthermore, in no group is there a significant difference in the overall severity of these two types of judgments. From these data it can be stated that the overall moral position of the foreign or American subjects is not perceived as marginal by them. Furthermore, since none of these groups perceives itself as marginal, there is no significant difference in the degree of perceived marginality among the various groups. However, there is a tendency on the part of the American subjects to perceive themselves as more marginal than the foreign subjects when rank order is used as the criterion (Table 3).

In comparing the two types of judgments (self and 'general public' at home) across all groups one finds that all subjects believe that their home public is more accepting of the use of violence (revenge, lynching, physical violence), deception (graft, bribery), cowardice, jealousy, and the practice of racial or religious segregation than the subjects themselves are. On the other hand, all are agreed that the home standards are more condemnatory than their personal standards with regard to most sexual practices (adultery, prostitution, premarital sex, petting, birth control, rape, incest, and illegitimate offspring).

Also worth noting are the following findings. Only the Americans feel that the attitudes of their home public are more severe with respect to insanity than their own attitudes. This judgment on the part of the American subjects probably reflects the condemnatory attitudes of the American 'general public' toward insanity since association with the insane, professional or otherwise, is held in contempt in American society (8). The Americans and, as will be seen later (Table 4), all other subjects as well, feel that the American public is very lenient towards the practice of divorce. This judgment probably reflects the extremely high divorce rates in the United States. Segregation, which is judged undesirable by all foreign groups whether referring to their own standards or to those presumably held by their home publics, is judged by the Americans to be held mildly desirable by the American public even

though the American subjects themselves condemn this practice. This judgment probably reflects the prevalent segregatory practices in the United States.

Atheism, which is judged to be more severely rejected by the home public than by oneself in most groups, is judged to be less severely condemned by the Korean public. This reversed judgment on the part of the Koreans most probably reflects the fact that most of the Korean lay public does not profess any religious affiliations, while the Korean subjects themselves are converting to Christianity in increasing numbers.

3. *The 'American Public' Norms and Deviation*

Table 4 compares the 'self' judgments of the three foreign groups with their perception of the moral standards of the *American public*. The rank order correlations between these two types of judgments in the two foreign groups are .79 for the Indians and .83 for the Koreans, thus again indicating considerable similarity in the ordering of the prohibitions. As can be observed, however, these two types of judgments differ significantly in overall severity in the Indian and the mixed foreign groups ($p = .04$ and $.02$ respectively). In the Korean group the overall difference in severity between 'self' judgments and judgments about the 'American public' does not reach statistical significance ($p = .18$). In all three groups the American public is generally judged to have less severe standards of morality. This is particularly true of those prohibitions pertaining to the *family* (rejection of child and parents, divorce, adultery), to *sex* (masturbation, premarital sex, petting), and to racial or religious *segregation*. There seems to be generalized agreement among all foreign subjects that the moral standards of the American 'general public' which relate to these areas are not comparable in severity with those the foreign subjects hold for themselves.

Only in the areas of atheism and censorship is the American public judged by the foreign subjects to have more severe standards than their own. The American subjects also indicate that the standards of the American public with respect to atheism are more severe than their own, but they feel that the practice of censorship is not sufficiently condemned by the American public.

It is also worth noting that while the Indians (and mixed foreign students) feel that the American public is more lenient about graft and bribery, and about war than they themselves; the Koreans feel that the reverse is true. Here it seems that contact with the American G.I.'s during the recent Korean war made the Koreans believe that Americans are strongly opposed to war and the spoils system associated with it.

In general, then, it can be stated that the foreign subjects judge the

American public to hold a more lenient overall code of morality than they themselves hold. The foreign subjects who were not marginal when perceived home public norms were used as reference appear to be quite marginal when using perceived American public norms as reference. This appears to be particularly true with respect to the areas of family, sex, and segregation.

TABLE 4
MEAN MORAL VALUE JUDGMENT OF SELF AND GENERAL PUBLIC U.S.A. BY
VARIOUS SAMPLES

Items	Indian (N = 78)		Korean (N = 40)		Mixed Foreign (N = 47)	
	Self	Gen. publ. U.S.A.	Self	Gen. publ. U.S.A.	Self	Gen. publ. U.S.A.
Intentional Murder	83	70	77	72	83	71
Rape	82	69	69	59	76	64
Incest	86	65	72	52	69	62
Lynching	76	51	64	62	77	54
Treason	75	78	61	55	70	67
War	69	49	52	53	69	47
Rejection of Child	66	27	56	20	60	35
Adultery	66	40	63	38	61	40
Stealing	62	58	55	54	56	46
Rejection of Parents	60	07	65	12	57	18
Graft, Bribery	60	47	41	44	60	49
Bigamy	45	51	60	47	58	60
Segregation	59	06	36	02	57	03
Homosexuality	62	47	35	29	53	32
Deception	56	48	49	37	50	32
Illegitimate Offspring	55	21	41	26	50	31
Physical Violence	49	45	34	36	44	37
Prostitution	42	36	43	39	53	38
Suicide	48	44	24	36	49	41
Drug Addiction	36	15	35	35	44	35
Revenge	41	24	23	16	39	26
Premarital Intercourse	46	02	26	-04 ^a	37	09
Alcoholism	39	04	29	29	40	24
Cowardice	40	37	12	05	28	20
Masturbation	33	17	09	-03	31	12
Jealousy	39	26	-03	-08	13	04
Divorce	21	-30	12	-21	27	-20
Atheism	24	41	13	20	19	34
Mercy Killing	10	00	13	13	36	27
Insanity	14	10	13	13	18	20
Censorship	-01	23	-02	10	12	21
Petting	-02	-59	07	-24	09	-28
Racial Intermarriage	-37	12	-11	08	-23	38
Birth Control	-49	-57	-34	-42	-21	-42
Dancing	-35	-79	-36	-63	-49	-76
Average mean judgment						
P-Values ^b	41	24	31	22	40	27
Rho	.04	.79	.18	.83	.02	.77

^a Minus sign indicates desirability.

^b Tested by the Mann-Whitney U-test.

In order to estimate the relationship between the degree of deviation from perceived home public norms with the degree of deviation from perceived American public norms, difference scores between 'self' and 'home public' judgments and between 'self' and 'American public' judgments were computed for each foreign subject in the Indian and Korean groups. The Pearson correlations of these two deviation scores¹ were .24 ($p < .05$) for the Indian and .61 ($p < .001$) for the Korean subjects. These positive and significant correlation coefficients indicate that non-conformity to perceived public norms tends to be generalized across the two reference groups.

The 'United States public' deviation scores of the Indian and Korean subjects were then related to their length of stay in the United States, their rural-urban background, their age, sex, and marital status, and their religious service attendance. The only variable which was found to be significantly associated with high and low deviation scores was the rural-urban background of the subjects. Indian subjects who came from towns or villages with a population of less than 100,000 showed a greater deviation from the norms they attributed to the American public than Indian subjects who came from cities with a population over 100,000 (Chi-square = 5.418, df , 1, $p = .02$). Only among the Indians was the range of population density large enough to permit such comparison. The greater proportion of rural people in the Indian group may then explain why the Indian subjects deviated more from perceived American public norms than did the Korean subjects.

In summarizing the findings on the deviation scores one may tentatively state that non-conformity to public norms appears to be generalized across different reference groups. The degree of deviation seems to be a function of the rural-urban background of the Far Eastern intellectuals. The rural foreign intellectuals appear to be critical of the moral standards of the American public as well as those of his home public. This critical view does not seem to be influenced by the length of stay in the United States or by other variables including the sex, age, and marital status of the foreign intellectual.

¹ deviation score for an individual was computed as follows: the difference between types of judgments was found for each moral prohibition, each of the differences was squared, the results added, and the square root of this sum taken. The result is the Deviation score in question, $\sqrt{\sum Ed^2}$ (6). Using these deviation scores the Indians deviated significantly more from perceived U.S. norms than they deviated from perceived home public norms ($t = 4.724$), while among the Koreans the difference between these two mean deviation scores did not reach statistical significance ($t = .774$). These individually derived deviation scores thus tend to confirm the results previously obtained from mean severity scores (Table 4).

D. DISCUSSION

Before evaluation of the findings it is advisable to consider a limitation of the present study. As will be remembered, the morally prohibited activities were presented to the subjects without specifying the situational context in which the activities occur. It is very probable that a morally prohibited act in a specific situation which may be judged as suicide or incest by one cultural group may not be so judged by another cultural group. Had such situational context been supplied, the judgments of the moral prohibitions would have shown greater cultural variability. While the lack of situational context was intentional, such deficiency does limit the evaluation of the findings.

None of the cultural groups of intellectuals studied in this investigation perceives itself as being morally marginal or generally different from its own society. The lack of findings on the overall morally marginal positions of academic elites may indicate any one of at least three different possibilities. Perhaps the moral codes of these intellectuals are actually not different from those of their own societies, and hence, these intellectuals do not perceive themselves as having different codes. Perhaps the moral position of these academic intellectuals is, in actuality, different but a minority group attitude of 'approval of conformity' is operating which makes for a 'denial of any significant observable difference' between the self and the 'general public.' Finally, among the foreign intellectuals, perhaps the enactment of the 'ambassadorial rôle' influences the foreign intellectual to assert the norms expected of a member of his society. The only clue to the choice of these three alternatives comes from the finding that the rural background of the intellectual makes for deviation from perceived American public norms. Since there is little reason to assume that the rural foreign intellectual would tend to enact the 'ambassadorial rôle' less often or that he would be less characterized by a minority group attitude, one would tentatively accept the first of the previously stated interpretations. It appears, therefore, that the academic intellectual in general does not occupy a morally marginal position in his own society. What is probably true is that on some specific moral issues such as the use of violence and the practice of racial or religious segregation the academic intellectual is particularly apt to take a stand against public opinion. In other issues, such as suicide and the rejection of parents or child, he has incorporated the cultural norms of his society.

In comparing the actual and perceived moral norms of the American and Far Eastern intellectuals two findings are of particular interest. The first relates to the stability of the general order of the various moral prohibitions. This order changes little whether the cultural background of the sample is

varied or whether the type of judgment pertains to oneself, to one's own society, or to a society different from one's own. One consistently finds that the prohibition pertaining to intentional murder, rape, and treason are among the most severely condemned by each sample. Among the most acceptable moral values within each sample one consistently finds birth control, petting, and dancing. Such stable ordering demonstrates that the moral value hierarchy may possess a greater degree of universality than might have been expected, at least in literate societies.

The second finding in this study pertains to the fact that the moral standards of the American academic intellectuals are more lenient than the standards of the foreign intellectuals, and American norms in general are perceived as lenient by the foreign intellectuals. That is, the moral self-image of the American intellectual is generally less severe than that of the foreign intellectual, and American society is perceived as having a laxer code of morality than that which the foreign intellectuals hold for themselves and believe their own society to hold.

The only exceptions to the latter finding occur in regard to war, censorship, and racial intermarriage which are condemned more severely by the American intellectuals than by the foreign intellectuals. The foreign intellectuals agree that the American norms are more severe with respect to censorship and racial intermarriage, but do not agree with respect to war. The implication of the judgments on racial intermarriage are fairly clear. The American intellectuals have, to some degree, adopted the prevalent attitude toward racial segregation in the United States. It would be difficult to imagine otherwise for the actual practice of racial intermarriage would meet such severe negative sanctions on the part of the American public that it would endanger the continued existence of such a union. The condemnation of war on the part of the American intellectuals is not significantly greater than that of the Korean intellectuals. Here again, the recent war experiences of the Koreans and the partially unresolved status of South Korea may be reflected in the less severe judgments of the Koreans. The attitudes toward censorship appear to indicate a genuine difference between the American and foreign intellectuals. The rejection of censorship is strongly associated with the desire for academic freedom. Academic freedom has been, and to some degree still is under attack, as evidenced by the signing of the loyalty oaths in many tax supported universities of which the Ohio State University is one. The issue of censorship, however, may be broader than that. Although many of the countries of the foreign students are still characterized to a greater or lesser degree by political and economic upheavals and uncertainties, the

United States has achieved considerable political and economic stability. While the use of censorship in a politically unstable country may be somewhat justifiable, censorship in a politically stable and secure country is highly objectionable to the intellectuals of that country, since it denies the right to free speech, free writing, and the freedom of other academic pursuits. Finally, it is also possible that the Far Eastern intellectuals play a greater rôle in determining the policies of their government than the American intellectuals play in the affairs of the American government. Such greater involvement with government policies on the part of the foreign intellectuals may make for a more favorable attitude toward censorship.

In considering the actual and perceived laxer moral standards of the Americans one must take into consideration the high rate of industrialization, intense capitalistic endeavors, and increased urbanization of American society. That urban moral standards are more lax is suggested by the fact that foreign intellectuals who come from small residential areas demonstrate greater deviation from perceived public norms than intellectuals who come from the larger cities. The cultural difference between such cities as Bombay, Calcutta, and New Delhi and the Indian villages is probably as great as the cultural difference between the American urban centers and these same villages. Here it must be remembered that the foreign intellectuals reside in an urban center in the United States and probably have little, if any, familiarity with rural America. Presumably, the perception of the laxity of American moral norms on the part of the foreign intellectuals would differ had their experience with Americans not been confined to the urban academic setting. Perhaps, also, the more severe moral norms of the foreign intellectuals are a reflection of the generally severer standards of a newly rising middle class in the Far East.

A final point to be considered relates to the finding that there is a greater similarity in the actual and perceived moral codes of the American and Korean intellectuals than there is between the American and Indian intellectuals. The greater moral disparity between the American and Indian intellectuals, and indeed, the generally severe moral standards of the Indians may again be explained by the fact that a large proportion of Indian intellectuals come from the small villages.

E. SUMMARY

1. This study investigated empirically three interrelated problems: (a) how do the moral norms of two different cultural groups of Far Eastern academic intellectuals in an American state university compare with those of an American group of academic intellectuals of the same university; (b)

how marginal are the moral positions of these three groups using perceived home public norms as a point of reference; and (c) to what extent do the foreign intellectuals deviate from the perceived moral norms of the American public, and what is the relationship between deviation from perceived American public norms and deviation from perceived home public norms.

2. The samples consisted of an American, an Indian, and a Korean group of subjects associated with the Ohio State University. Each subject was seen in a standardized, individual interview by an interviewer from the same country as the subject. During the interview each subject was requested to rate a set of 35 morally prohibited activities as to their offensiveness or desirability (a) as the 'general public' in his home country would rate them, (b) as the 'general public' in the United States would rate them, and (c) as he himself judges them.

3. The findings indicate that none of the groups studied perceives of itself as morally marginal with respect to their home country norms. Deviation from perceived home public norms was significantly and positively related to deviation from perceived American public norms. Deviation from perceived American public norms was found to be related to the rural-urban background of the foreign subjects, the rural subject deviating more than the urban subject. It is suggested that the intellectual status per se does not indicate moral marginality in general, but only in certain issues. General moral marginality may be related to the rural background of the subject.

4. In general, the actual moral norms of the American subjects and the perceived moral norms of the American public were found to be more lenient than the actual norms of the foreign subjects and those perceived by them of their own societies. All subjects judged the home public norms to be more lenient in the areas of violence, deception, cowardice, jealousy, and segregation, and less lenient with respect to various sexual practices than their own.

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AN INDIAN MODIFICATION OF THE THEMATIC APPERCEPTION TEST*

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A. INTRODUCTION

The Thematic Apperception Test, which is widely used in Europe and America, has been one of the most important devices for studying the structure of personality. It is, however, not culture-free to the same degree as the Rorschach, but is based on the cultural pattern of Europe and America. To use this important instrument with people whose social patterns are different and whose social values are oriented from another angle, it would seem necessary to adopt or modify it to make it applicable to new conditions.

This was attempted by C. E. Thompson (7) for Negro students in the United States, as he found from clinical experience that they failed to identify fully with "White" stimulus figures. Korchin, Mitchell, and Meltzoff (3) have, however, questioned the validity of Thompson's arguments, based on results obtained from a small sample of Southern Negroes, and not corroborated when larger samples of Negro and White populations in Philadelphia were tested. They were of the opinion that the substitution of figures closely resembling their own group was likely not to elicit fuller response, but to reduce ambiguity, which is a very important feature for revealing the basic factors of personality in the TAT. There seems to be some force in this criticism, and there can be no doubt that the universal character of the *TAT* figures should not be lost on any account. On the other hand, it should not be forgotten that if the human figures and situations used are very unlike those of daily life, they are not likely to evoke adequate responses, as measured by length of stories (the criterion used by Thompson) or by their contents. This difficulty did not arise with the Negro samples of Philadelphia who, after all, live in the same cultural climate as their white neighbors.

Granting, therefore, the justification for the criticism of the Thompson *TAT*, it is clearly not applicable to people who have different social patterns and whose life situations are slanted from another angle. This was also the

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view taken by the U.S. Office of Indian Affairs and the Committee on Human Development of the University of Chicago in their joint research on Indian Education, when the *TAT* was to be applied to children of six Indian communities (2). They found that the *TAT*, representing a different cultural milieu, was not applicable to them, as easy identification with these test materials was impossible. Accordingly, a set of 12 new cards drawn by an Indian artist and representing the domain of their experience was substituted for the *TAT* (2).

A parallel situation was noticed by me in the case of the Abor tribes of the North Eastern Frontiers of India, among whom the rôle of authority in a group situation was found to be far more important than a single Oedipus situation. Likewise, sex aggression, triangular situations, and family life were oriented from angles to which the *TAT* had hardly any application. For them, consequently, an entirely different set of stimulus figures had to be designed.¹ Similarly, while Indian thought and religious values have deeply penetrated Tibet, the cards drawn for Tibetan use by Prince Peter of Greece on the exact model of my Indian pictures seem to be of dubious value; for with respect to the Tibetan social system, e.g., polyandry, the divergence from India is very great. It remains to be seen, when his results are analyzed, how far the Tibetans have responded to stimulus figures according to Indian patterns.

In the case of India, while in some respects, such as the joint family and the wide field of religious phantasy, there are no real counterparts in modern Euro-American society, there is also a considerable area presenting allied problems and real comparability of the European and the Indian system. Here the subject's identification with Western images is possible, given an appropriate Indian setting to the pictures.

When, after several months of work, the inadequacy of the original *TAT* for Indian subjects had become apparent, steps were taken to evolve a standard set of pictures for work in India. In devising such cards, the criteria of ambiguity and the generalized structure of the pictures have been carefully retained, to reveal the full range of emotion as well as the possible solutions of problems in the subjects' minds. In the attempt to adapt the *TAT* for Indian use, great care was taken to consider these factors. Yet every effort was made to keep to the original cards as far as possible, and no innovations were introduced unless they were found absolutely essential for effective use of the test under Indian conditions.

¹ The writer received her training in projective tests, including the *TAT*, in 1949, under Mlle. Lezine of the Wallon Vocational Guidance Institute of Paris; Professor Ombredane of Brussels; Professor Bleuler and Dr. Bash of Zurich; and Mr. Phillipson of the Tavistock Clinic, London.

As defined by Murray (5), the *TAT* is a method of revealing to the trained interpreter some of the dominant drives, emotions, sentiments, complexes, and conflicts of personality. He explains that the object of the test is to make the subject project through the medium of these cards his own underlying needs and phantasies. A critical situation is to be portrayed in each picture which must be such as to bring out the phantasy associated with it. Further, the cards should be comprehensive, and each should depict a person with whom the subject can clearly identify himself (4).

B. THE MODIFIED *TAT*

Keeping these objects in mind, the categories of difference between the European and the Indian have first to be defined.

In certain respects, as has been mentioned, Indian social situations do not have counterparts in Euro-American society as portrayed in the original Murray cards; note especially the joint family system and religious phantasy. About other problems, such as the Oedipus situation, aggression, the triangle, sex aggression, depression, ambition, there is no basic difference between the situations in the original and the Indian, although they are revealed through different social media. Pictures reconstructed at first from imagination and published in illustrated journals turned out to be lifeless and stereotyped, and could not evoke empathy or form a proper basis of identification for the respondents' feeling and needs. As a consequence, photos from life models were substituted. These photographs brought out gestures and postures to suit the purposes of the tests. They were not, however, exactly copied in the drawings, but were modified from projections through the epidioscope in such a manner that the figures, dresses, modes of coiffure, etc., were not too close to the people, but were more of a generalized nature. Seventeen cards were drawn and tested on a small sample, and from the experience gained, 15 cards were selected and given to 260 individuals of rural and industrial areas of South Bengal. Out of these 15 cards, 14 were finally chosen. Among these are Card II and VIII to represent especially the joint family and religious phantasy not found in the original *TAT*. The importance of the rôle of religion in both European and Indian life is undoubted, but in the latter there is a special feature which is not so prevalent elsewhere, namely phantasy. In Murray's cards these aspects of religion find no expression. Various attempts were made to represent Sivalinga (Indian phallic symbol) and other characteristic marks of current Hindu religion, but without success. Card VIII was finally drawn to meet this need, and an ambiguous picture of a dilapidated temple with a female devotee was drawn to be equally applicable to the main sections of the Indian community.

In place of Murray's original card showing a boy with a violin, an Indian boy was substituted with a *Sitar* or *Tanpura* (popular Indian stringed instrument). The responses evoked from Card I are most valuable. As the area was under acute economic stresses since 1941, they are largely pervaded with anxiety and frustration. This overriding influence of economic strain is shown by many stories indicating the *Tanpura* as the (a) main support of life, chiefly on a phantasy level; as (b) causing frustration of personal ambition; and as (c) a means of consolation. The percentages of individuals giving such responses are 33, 22, and 9 respectively. Examples follow:

a. *Musical Instrument as the Main Support of Life (Upper Caste Hindu Male, Case No. 27)*. "Once the boy was well off. Due to the reverses of fortune, however, he has now to depend on public charity. To hold a begging bowl to each and every person is thought to be damaging to his self respect. So he chooses a particular spot where, by his music, he can attract people and thus find a means of living."

b. *Musical Instrument Causing Frustration of Personal Ambition (Upper Caste Hindu Female, Case No. 9)*. "A boy was playing the *Tanpura* (stringed instrument). Suddenly the string of the instrument broke. Then he sat sadly wondering, with his hand to his cheek. Possibly the boy was very poor. He had a great ambition to play the *Tanpura*, but he was so poor; how could he buy a new one?"

c. *Musical Instrument as a Means of Consolation (Upper Caste Hindu Female, Case No. 18)*. "The boy has taken the musical instrument to give him consolation. He had once done something bad at home. For this he was scolded and beaten. This hurt him very much. He had a *Tanpura* but no other companion. After being scolded at home he went to a certain place and sat there sorrowfully with his musical instrument."

The story reveals also the tension against parental authority. Other psychological factors, however, are not entirely absent. Representation of the parents as protective or domineering, or of ambivalence towards the mother, is present.

Castration fear and blindness suggesting fear of punishment by the Super Ego also occur as symbolized in the following stories:

d. *(Upper Caste Hindu Male, Case No. 25)*. "A very young orphan is sitting sorrowfully and sadly wondering when he will grow up. Perhaps the boy has no relatives. Since his childhood he was interested in songs and he has learnt a little music. So all the time he thinks how he can grow up and go out into the world. One day the string of the instrument broke. Then he was greatly worried. Since his childhood the musical instrument

was his companion. So glancing at it again and again at this instrument he thinks that it is my life long friend so I shall grow by its help."

e. *Insecurity, Loss of Parental Love, Fear of Castration (Upper Caste Hindu Male, Case No. 6)*. "The boy was very poor but had a great ambition to play the *Tanpura*. His father in order to please him bought a *Tanpura*. The boy was beside himself with joy. After returning from school



FIGURE 1
CARD I

each afternoon he would sit and play happily. But suddenly one day his dear instrument got broken. The grief that overtook him is clear before his eyes. The ideal father has allowed him to have the desired object, but the sense of guilt and fear of punishment and castration seem to be uppermost."

f. (*Upper Caste Hindu Female, Case No. 7*). "A little boy is very fond of music. He also feels miserable because his mother is dead. But he cannot let her beloved possession go. The thing is a *Tanpura*. He is lamenting

the loss of his mother. He could not see his mother when she died. He thought it was no use brooding over the past. Then with Tanpura near him, he thought: 'If I could see her once.'"

The response indicates ambivalence, love, and hostility; feeling towards the mother is transferred to the musical instrument.



FIGURE 2
CARD II

g. (*Upper Caste Hindu Male, Case No. 24*). "The boy is very poor. He makes one think that he must be a fine singer. I think the boy is blind. He has no companions, so he sits and thinks all sorts of things. To-day he cannot sing that is why he is so worried, what will he eat if he is unable to go out."

Murray's Card II represents the single biological type of the European family, but is inapplicable to the Indian extended family. The original single family situation envisaged by Murray had therefore to be replaced by the joint family situation. The picture was redrawn to include the family

group, consisting of the grandmother, father, mother, son (adult), daughter (adult), unidentified child, and the reactions of the authority figures to the meeting of the young boy and the young girl. The grandmother's rôle in the Indian joint family, being very important, has to be shown; and a child

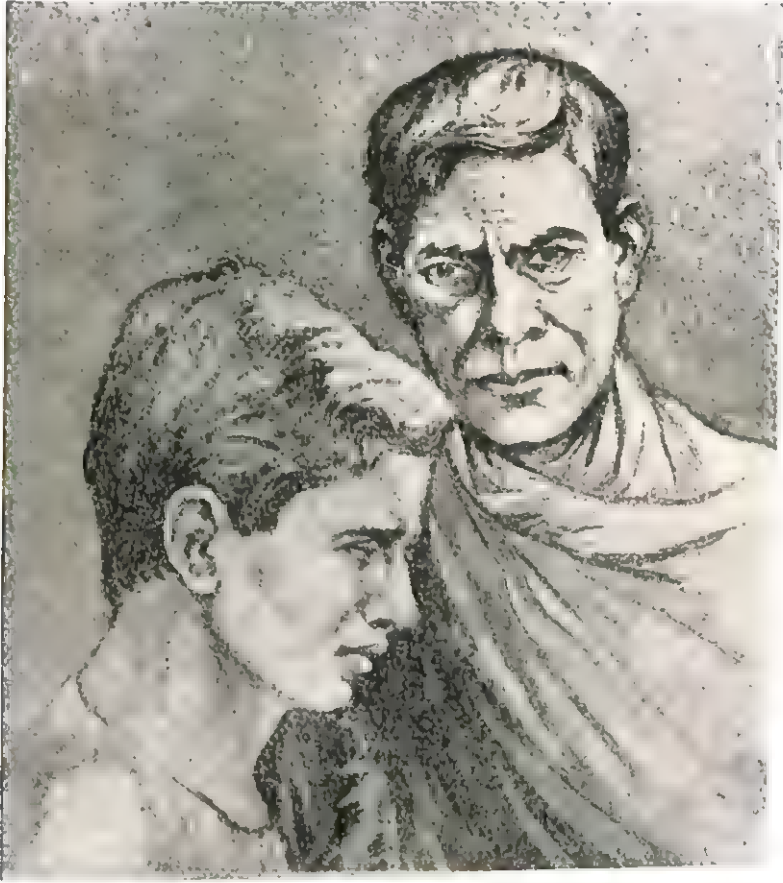


FIGURE 3
CARD III

was introduced in the picture with unidentified sex, the idea being to note sibling jealousy and rivalry.

Oedipus situations have been taken into consideration as important factors, as in the original set. These four situations are: father and son, mother and daughter, mother and son, father and daughter. Though there is basic similarity with Murray's original situations, the cards were modified and oriented from the standpoint of Indian social patterns.

Card III, Father and Son. Murray's Card VII was replaced by two Indian figures of father and son (drawing based on life model). The father has the superior and authoritarian rôle, but shows mixed feelings. Expressions in both were made ambiguous as far as possible.



FIGURE 4
CARD III

Card III, Mother and Daughter. Murray's original Card VII was modified in terms of Indian ethnic types and social life.

Card IV, Mother and Son. Murray's original Card VI was replaced by two Indian figures of mother and son, and changes were made to show ambivalent attitudes between mother and son (based on life models).

Some other problems dealt with are:

Aggression, Card V. From the point of view of the study of frustration, the situation represented in the card is very important. This point was tested through many cards, but the Card V was chosen in place of the original Card XVIII and constructed in an ambiguous manner to reveal more clearly



FIGURE 5
CARD IV

the underlying mental attitude. This card elicited good response and formed a suitable background for revealing sadistic or masochistic reactions.

Triangle. At first it was found rather difficult to represent this situation. Several cards were drawn, but all failed to elicit the proper type of reaction. Finally, Card VII and VII Addl. were drawn. In Indian society, the wife's resentment against the husband's attachment to another woman, though not very outspoken, is not absent. At first Card VII Addl. was drawn to test this situation which held more closely to the original idea, but was found

inadequate. It was necessary to reconstruct the second card, changed somewhat from the original to portray the special situation of a joint family, involving the presence of the sister-in-law (elder brother's wife or husband's sister) and also to reveal the sense of deprivation of love and the jealousy of another woman seen in the usual triangular situation.



FIGURE 6
CARD IV

Card IX. The original Card XIII could not be retained, as preliminary testings showed that it did not bring out proper responses from the Indian subjects. It was then replaced by two cards with Indian drawings whose figures and conditions were based on imagination. Ultimately one of these two cards, Card IX, was found more suitable for the purpose and retained.

Card X. The original Card XIV was redrawn to suit an Indian scene, with figures and dresses made ambiguous.

Card XI. The original blank Card XIV was retained.

The first two cards, Card I (Figure 1) and Card II (Figure 2), were presented in the order given by Murray and the rest were presented in a

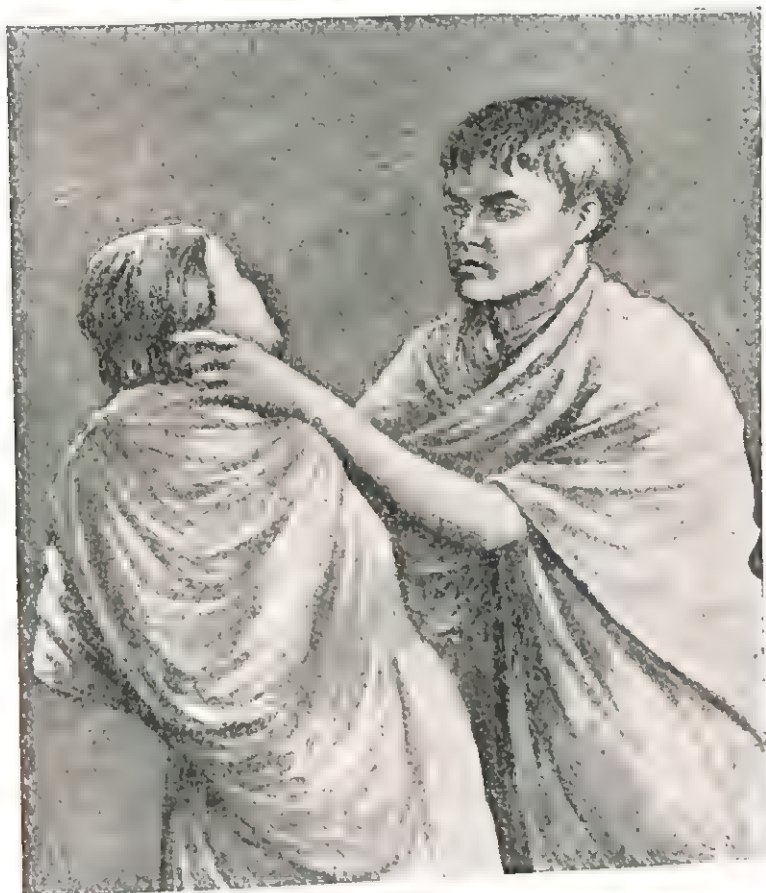


FIGURE 7
CARD V

somewhat changed order, namely Card III (Figure 3); Card III (Figure 4); Card IV (Figure 5); Card IV (Figure 6); Card V (Figure 7); Card VI (Figure 8); Card VII (Figure 9); Card VIII (Figure 10); Card IX (Figure 11); Card X (Figure 12); Blank Card (not illustrated); Card VII Addl. (Figure 14).

In applying the test I thought it prudent to profit by the lesson derived

from my experience with the Rorschach that strict adherence to a time limit is likely to defeat the very purpose of the test, as Indians of rural areas are not accustomed to work within specified times. Some relaxation on this account was necessary. It was also thought advisable not to begin immediately with the test, as the initial resistance of the subjects to such a novel thing had first to be resolved. Investigation was therefore started with a set of direct questionnaires on social life, which was not difficult for them to



FIGURE 8
CARD VI

understand, after which, when the subjects had become somewhat used to testing, the *TAT* was applied.

C. THE SAMPLE

These 14 cards were applied to the upper and the lower sections of the Hindu community, and to the Muslims. Each group differs in respect to educational and social background, economic status and religious and ethical ideals, so as to provide a cross section of Indian society in general. The

educational backgrounds of the three groups can be briefly summarized as follows:

Considering the community as a whole, out of 260 individuals tested 30.4 per cent were illiterate, 8.1 per cent could just read and write, 38.2 per cent had primary education, 24.3 per cent had secondary education. Of these, 43.1 per cent were students, 17.7 per cent were variously occupied, 12 per



FIGURE 9
CARD VII

cent were unemployed, and 17.2 per cent of women engaged only in household work. When these figures were analyzed according to economic status, the results were as follows:

Upper Caste Hindus. Out of 95 individuals tested 5.3 per cent could only read and write, 49.5 per cent had primary education, 45.2 per cent had secondary education.

Lower Caste Hindus. Out of 57 individuals 40.0 per cent were illiterate, 10.5 per cent could just read and write, 36.8 per cent read up to the primary standard, and 11.5 per cent read up to school final standard.

Muslims. Out of 108 Muslims, 51.9 per cent were illiterate, 9.3 per cent could just read and write, 24.7 per cent had received primary education, and only 14.8 per cent read up to the school final standard.

D. RESULTS

The adopted version of the *TAT* was applied in the manner described above, in strict accordance with the instructions laid down by Murray.

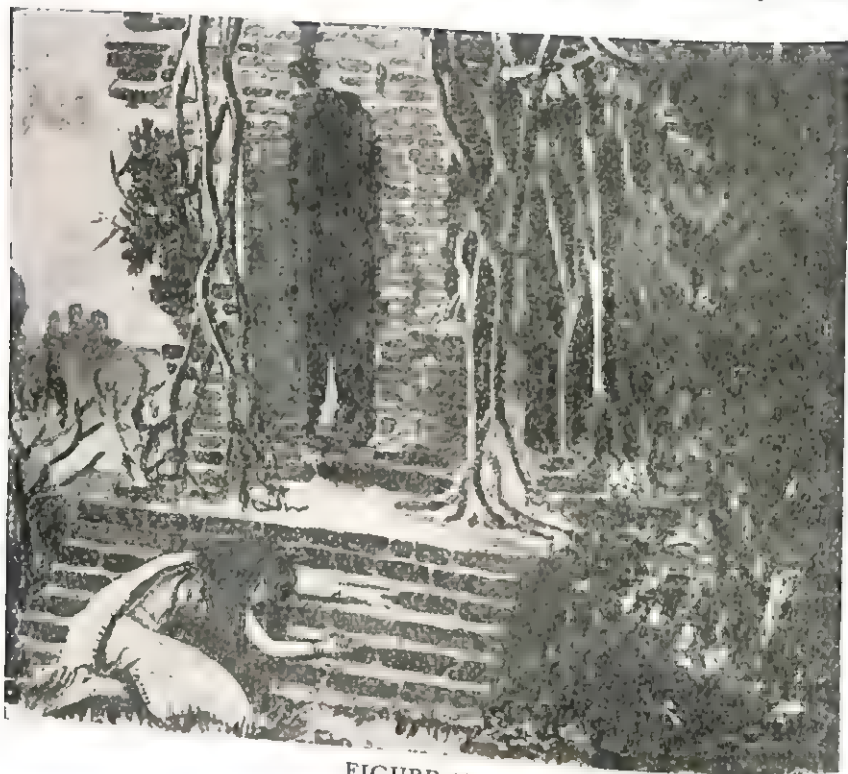


FIGURE 10
CARD VIII

Altogether 3,300 stories were collected which were analyzed separately according to their content and form and grouped under 15 heads. In terms of the stories given, the respondents were divided into six classes:

1. Mere description, e.g., a tree, a man, etc., without any attempt at association or action.
2. Description in terms of action, but failing to attach any affective element or reference to family relationships; e.g., a man is sitting, or a farmer is ploughing, etc.

3. Descriptions including elements of kinship, such as "a mother is sitting with the child," etc.
4. Reference to affective elements, but not to kinship.
5. Reference both to kinship and to affective elements, such as: "the mother and son are standing; mother is worried about the son's health," etc.
6. Reference to kinship, affect and warmth, with complicated types of plots.



FIGURE 11
CARD IX

Taken as a whole, the responses were found to reveal quite satisfactorily the inner drives and repressed wishes of the individuals, as well as fear and anxiety which were moulding their behavior patterns, and press elements.

The incidence and the depth of these hidden forces were found to differ in the various groups according to their educational and social backgrounds. Stories with affect were given mostly by the Upper Caste Hindus and Muslims, and very little by the Lower Caste Hindus. Stories with imagination, including abstract types of imagination, dramatic situations, humor

and problem solving attitudes, are found much more among the Upper Caste Hindus than among the other two groups.

In Table 1 are given the contents of the responses of the total group.

TABLE 1
AVERAGES OF WORDS, LINES, AND TIME TAKEN BY THE 260 INDIVIDUALS

Castes	Words	Lines	Minutes taken
All Castes	649.4	60.7	105.1
Upper Castes	1110.9	99.2	189.6
Lower Castes	487.3	47.4	69.4
Muslims	329.1	33.7	49.6

The average of words, lines, and time taken for the group on the total number of cards are 649.4, 60.7, and 105.1, respectively, for the three categories. When the groups are compared, it is found that the figures for the Lower Caste Hindus are higher than those for the Muslims, but much lower than those for the Upper Caste Hindus. The scores of the Muslims are not far from those of the Lower Caste Hindus. With regard to lines, the averages of the Lower Caste Hindu subjects and the Muslims are similar. Compared to the Upper Caste Hindus, however, the differences are extremely marked. Similarly, with respect to time, Upper Caste Hindus took nearly three times as long as the rest. Lower Caste Hindus and Muslims used very little thought or judgment; quick responses were given without much consideration and imagination, revealing very little of what the pictures were expected to evoke, while Upper Caste Hindus gave considerable thought and judgment to the task. Static or mere descriptive types of responses were given mostly by the Muslims, illiterate males and women. Next to the Muslims came the answers of the Lower Caste Hindus. Among the Upper Caste Hindus, however, static responses are almost absent; when they resorted to simple descriptions, it was definitely with the idea of stating their actual feelings about love and sex.

E. DISCUSSION

The lack of richness of production and imagination among the Lower Caste Hindus and Muslims do not appear to be due to lack of identification. Even when mention was made of a search for friends and relations in the cards, no highly imaginative theme was given. The situation can be compared with the finding of William Henry in a review of 63 Oraibi records. The records were short and sketchy and lacking in imaginative details. On the basis of previous research he also thought that there would be little value in studying these records for individual personality. As Murray (5) has

remarked, the average story for 10-year-old children is one of 140 words, and a group of stories from a non-psychotic adult averaging less than 140 words per story usually indicates lack of rapport and coöperation, lack of self-involvement. As a rule they are not worth scoring (1). For the purpose of exploring this hypothesis, these materials were subjected to individual



FIGURE 12
CARD X

analysis, which proved to be of value (1). Similarly, when the records from the Lower Caste Hindus and the Muslims were studied, they revealed useful information about the personality which was corroborated by life history materials.

The Rorschach responses of these subjects were likewise congruent with the *TAT*. The modification of the *TAT* described in this paper may therefore be taken as an adequate and suitable test for Indian subjects, and it fulfills the purpose for which it has been designed.

In conclusion I wish to express my indebtedness to Dr. B. S. Guha, Director, Department of Anthropology, for the interest taken by him in this research; to Messrs. Karmaker, Pal, and Mukerjee for the drawing of the pictures, and lastly to Messrs. D. Mukerjee, S. Mazumdar, and S. Chatterjee for the statistical analysis of the data.

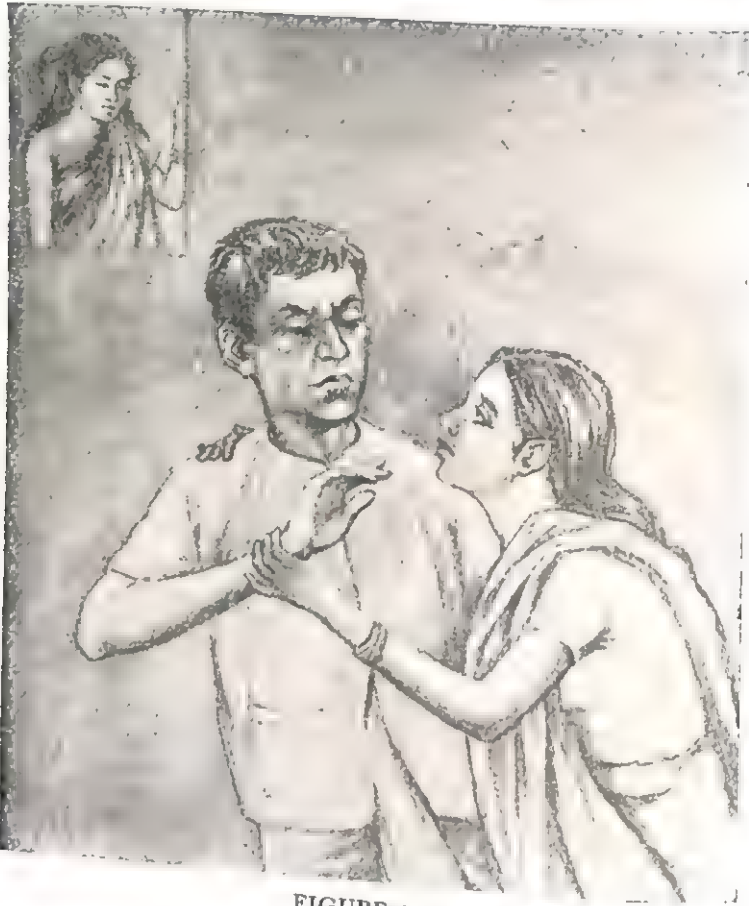


FIGURE 14
CARD VII Addl.

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THE CROSS-CULTURAL APPLICATION OF THE ADJECTIVAL CHECK LIST ADJUSTMENT INDEX: A PRELIMINARY REPORT*

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A. PURPOSE

The 1958 World Federation Mental Health Conference on methodological issues in mental health research strongly stressed the need for the adaptation, development, and standardization of diagnostic and research techniques which could be used cross-culturally (26). The development and standardization of potential cross-cultural techniques represents a formidable research task due to the operation of a multiplicity of factors associated with societal and cultural differences which influence the reliability, the relevance, and the validity of techniques. Among the most obvious issues to be resolved are problems in semantics and alterations in the psychological meaning of words in the translation from one language to another; variations in the definitions, limits, and the ranges of tolerance for "normal" and "abnormal" behavior within different societies and cultures; the subtle cultural effects upon the forms of personality disorders and their underlying psychodynamic processes; and, societal differentials related to the individual's set, readiness, and orientation toward tests (11, 13, 14, 27).

Paper and pencil diagnostic tests, particularly the type described in this report, are especially susceptible to semantic misinterpretation when translated into another language. The anthropologist, Kluckholm, highlighted the difficulty of the translation process when he recently wrote:

Really, there are three kinds of translation. There is the literal or word-by-word variety which is always distorted except perhaps between languages that are very similar in structure and vocabulary. Second, there is the official type where certain conventions as to idiomatic equivalents are respected. The third, of psychological type of translation, where the words produce approximately the same effects in the speakers of the second language as they did in those of the original, is next to impossible (11, p. 121).

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It should be recognized that the use of cross-cultural tests is a relatively new development in the social sciences and that the few devices which have been employed with any frequency have been the projective techniques, particularly the Rorschach method. Non-projective instruments which are more dependent on language, pose more problems than the projective devices when used cross-culturally. For example, what kind or kinds of subjects should be employed at this early stage of the development of possible cross-cultural, non-projective tests? We would propose that the university students of the various countries may constitute our best subjects for the paper and pencil tests *at this time*. Universities are an excellent source of subjects for these tests because: students are literate and available; universities and students are generally accustomed to research and tend to have receptive attitudes toward research; the students may represent the various groups within the country and thus, are a jumping-off point for more intensive investigations within that country (26). However, student samples may be biased especially in those societies where university attendance is highly correlated with the economic and social status of the student's family.

With these many problems in mind, the purpose of this paper was to present some preliminary evidence related to the value of an adjectival checklist (afterwards referred to as the *ACL*) as an index of personal adjustment and to suggest that this technique may be applicable to literate members of the various Spanish-speaking societies of Latin America. The *ACL* is a measure of personal adjustment in the United States and England (1, 7, 10, 15, 20). The high levels of reliability and validity of the *ACL* have been reported by Gough (7), by Sarbin and Rosenberg (20), and by others (1, 15). In a forthcoming publication these writers briefly described the development and standardization of a *Spanish* version of an *ACL*; and, used the technique for screening mentally "healthy" subjects and for demonstrating quantitatively the existence of greater psychopathology within a sample of diagnosed neurotics than within a sample of healthier controls (13). The procedure used for developing the technique, the specific scoring indices employed, and the results for a sample of neurotics and for a sample of healthier controls are presented below.

B. CONSTRUCTION OF THE *ACL*

The procedure for the construction of the *ACL* involved four simple steps. First, a list of 300 potentially self-descriptive adjectives (favorable, neutral, and unfavorable terms) were compiled from the case records of our hospitalized neurotics and from Puerto Rican and Latin American newspapers and

magazines. Some of the adjectives selected described the specific characteristics of the neurotic (weak, anxious, unhappy, maladjusted, etc.); some the ideal stereotype of the Latin cavalier (noble, strict, honorable, religious, heroic, etc.); while others represented derogatory stereotypes of the Latin such as lazy, vain, revengeful, distrustful, and the like.

Secondly, five qualified psychiatrists were asked to assume independently that each adjective was used as a self-description by a Puerto Rican and to judge each as favorable, neutral, or unfavorable. Puerto Rican-psychiatrists judges were employed to make the final judgements both because of possible societal and cultural differences in the conventional usage of terms as well as their experience in working directly with the mentally ill within this society. For example, numerous adjectives (emotional, passive, hostile, selfish, vain, sensual, etc.) which tend to have an *unfavorable* personal connotation in the United States and England tend to be perceived in this society as *neutral*. In addition, there are many variations, unconscious assumptions, and differences in colloquial expressions within the various societies of Latin America. It is suggested that investigators using the *ACL* included herein first pretest each adjective to discover its *exact* societal connotation and its implications in terms of the mental health criteria and standards as defined by that society.

Thirdly, if four or more of the psychiatrists-judges (the 80 per cent agreement level) rated the adjective in the same category, the particular word was placed on our final list. Four or more of the psychiatrists agreed in the categorization of 112 adjectives. These adjectives expressed in Spanish, their approximate English counterparts and their classification as favorable, neutral, or unfavorable by the psychiatrists are shown in Table 1.

And last, 12 white-collar employees of this Institute were asked if they could adequately describe themselves using only the 112 words of our final list. All 12 responded affirmatively.

C. SUBJECTS AND ADMINISTRATION

The subjects employed to gather data relevant to the *ACL*'s "discriminatory power" consisted of 16 maladjusted experimentals and 32 healthier controls. All 48 subjects were students attending universities in Puerto Rico and all were native-born Puerto Ricans. The 16 experimentals had all asked for psychiatric help and, according to the psychiatrists whom they consulted, all were suffering from neurotic complaints and disorders.² Our 32 control subjects were selected from a pool of 750 students all of whom were

² We wish to express our appreciation to Fernando M. Monserrate, M.D., consulting psychiatrist, for his kind coöperation in obtaining and testing the majority of our neurotic subjects.

TABLE 1

THE MALDONADO-SIERRA ADJECTIVAL CHECK LIST:
Including the Categorization of Each Adjective and Its English Equivalent*

F. Noble (noble)	F. Adjustado (adjusted)
N. Hostil (hostile)	F. Honesto (honest)
F. Fuerte (strong)	N. Superior (superior)
U. Cruel (cruel)	U. Estúpido (stupid)
F. Adorable (adorable)	N. Virtuoso (virtuous)
N. Vano (vain)	F. Sencillo (simple)
F. Justo (just)	U. Tonto (foolish)
F. Líder (leader)	N. Metódico (methodical)
U. Rudo (rude)	U. Borracho (drunken)
U. Débil (weak)	F. Ordenado (orderly)
N. Sensual (sensual)	U. Miedoso (fearful)
F. Alerta (alert)	U. Odioso (hateful)
F. Activo (active)	N. Racional (rational)
F. Útil (useful)	N. Egoísta (selfish)
N. Bonito (pretty)	F. Sincero (sincere)
N. Pasivo (passive)	N. Triste (sad)
U. Vulgar (vulgar)	U. Injusto (unjust)
F. Guapo (handsome)	N. Atrevido (daring)
N. Libre (free)	U. Ansioso (anxious)
U. Vago (lazy)	F. Contento (content)
U. Mártir (martyred)	N. Bebedor (drinker)
F. Sexual (sexual)	F. Alegre (happy)
U. Sumiso (submissive)	U. Inferior (inferior)
N. Callejero (running around)	F. Estricto (strict)
F. Serio (serious)	F. Cariñoso (dear)
N. Cómico (comical)	N. Hablador (talkative)
U. Malo (bad)	N. Añinado (childish)
F. Heroico (heroic)	N. Envidioso (envious)
U. Celoso (jealous)	U. Parásito (parasitic)
N. Dominante (dominant)	N. Encantador (enchanting)
F. Honorable (honorable)	N. Supersticioso (superstitious)
N. Impulsivo (impulsive)	N. Sugestionable (suggestionable)
F. Protector (protecting)	U. Desobediente (disobedient)
F. Tolerante (tolerant)	F. Conservador (conservative)
F. Agradable (agreeable)	N. Autoritario (authoritarian)
F. Respetable (respectable)	N. Americanizado (americanized)
N. Silencioso (silent)	F. Sentimental (sentimental)
U. Desconfiado (distrustful)	F. Independiente (independent)
F. Civilizado (civilized)	U. Desagradable (disagreeable)
F. Eficiente (efficient)	U. Descontento (unhappy)
N. Precioso (cute)	F. Democrático (democratic)
U. Vengativo (vengeful)	N. Bondadoso (kind)
N. Espiritual (spiritual)	N. Amenazante (threatening)
N. Sensitivo (sensitive)	F. Industrioso (industrious)
F. Religioso (religious)	U. Irrazonable (irrational)
F. Obediente (obedient)	F. Inteligente (intelligent)
N. Ambicioso (ambitious)	F. Científico (scientific)
N. Artístico (artistic)	F. Comunicativo (communicative)
F. Razonable (reasonable)	N. Dependiente (dependent)
N. Orgullosa (proud)	U. Dishonesto (dishonest)

* The symbols F, N, and U denote adjectives categorized as favorable, neutral, and unfavorable, respectively, by four or more of the psychiatrist-judges.

TABLE 1 (*Continued*)

THE MALDONADO-SIERRA ADJECTIVAL CHECK LIST:
Including the Categorization of Each Adjective and Its English Equivalent*

U. Peligroso (dangerous)	F. Apasionado (passionate)
N. Emocional (emotional)	F. Satisfecho (satisfied)
U. Histérico (hysterical)	N. Imaginativo (imaginative)
F. Adaptado (adaptable)	U. Malajustado (maladjusted)
F. Valiente (valiant)	U. Traicionero (traitorous)
F. Progresivo (progressive)	U. Irresponsable (irresponsible)

tested. As far as could be determined, none of the 32 controls were experiencing serious mental health problems at the time of the study.

Experimentals and controls had previously been matched on the basis of 11 criteria for a study testing the relationship between family beliefs and neurosis. The 11 criteria employed in the matching procedure for the aftermentioned study (13) included sex, age, marital status, religion, church attendance, occupational orientation, etc., as shown in Table 2. There were no significant statistical differences between controls and experimentals for the 11 matching variables employed.

Personal and family background as well as *ACL* data were gathered from all 48 subjects. The administration of the *ACL* was by groups and individ-

TABLE 2
STRATIFICATION OF VARIABLES EMPLOYED TO MATCH THE EXPERIMENTAL AND THE CONTROL SUBJECTS

No.	Variables	Experimentals (N = 16)	Controls (N = 32)
1.	Sex: ratio of males to females	3/1	3/1
2.	Age: median age of subjects	21	20
3.	Marital Status: per cent of subjects who were single	81	81
4.	Family size: median number of siblings of subjects	4	5
5.	Religion: per cent of subjects who are catholics	81	87
6.	Church attendance: per cent of subjects who attend church weekly	56	59
7.	Parents' marital status: per cent of subjects' parents living in the same household	75	75
8.	Home ownership: per cent of subjects' parents who were home-owners	87	84
9.	Value of homes: estimated mean property value of home-owners	7,800	6,500
10.	Annual income of subjects' father for the position of greatest duration	2,010	2,680
11.	Subjects' occupational orientation: determined by comparing subjects' occupational choice to that of his father	Up-mobile	Up-mobile

uals. Subjects were asked only: "Please read this list of adjectives carefully and place a one, 1, in front of each word which describes you. Use as few or as many words as necessary for you to adequately describe yourself." In response to all questions from subjects, the examiner merely repeated the above instructions. Also, subjects were asked to describe the typical Puerto Rican male and female, the ideal self, and the ideal Puerto Rican male and female employing the same list of words and similar instructions. For example, to elicit descriptions of the ideal self, subjects were asked: "Please place a four, 4, in front of each word which describes the kind of person you would like to be."

D. RESULTS

The performance of the 48 subjects on the *ACL* was analyzed by making four index comparisons of the adjectives selected by the neurotic experimentals with those selected by the healthier controls. These four comparisons included the index of self-criticality, the index of proportional differences, the ideal self-actual self discrepancy index, and the index of self-acceptance. Each index and the results for each is described below.

1. *The Index of Self-Criticality*

The index of self-criticality was operationally defined by Sarbin and Rosenberg (20) by the formula:

$$\text{Index of Self-Criticality} = \frac{\text{No. of Unfavorable Adjectives Checked}}{\text{Total No. of Adjectives Checked}}$$

If the *ACL* was a valid adjustment device, we expected that the experimentals would tend to employ significantly more adjectives which were unfavorable in describing the actual self than would the healthier controls. The results for this index were: the 16 experimentals used 74 adjectives categorized as unfavorable in a total of 361 adjectives chosen; whereas, the 32 controls employed 66 adjectives categorized as unfavorable in a total of 692 adjectives chosen. Applying the Chi-square test of homogeneity (24) with a 2×2 tabular organization of these data, Chi-square was equal to 128 which indicated that the experimentals chose significantly more ($p > .01$) unfavorable terms to describe the actual self than did the controls.

2. *The Index of Proportional Differences*

The index of proportional differences was used to determine the percentage by which the two samples compared in agreement as to the applicability of an adjective to their self-descriptions. If the *ACL* was a valid adjustment device, we expected that a percentage difference analysis would discriminate clearly

between the two groups. This index was calculated by computing, word-by-word, the percentage of experimentals and the percentage of controls who used each word to describe himself. Table 3 depicts the proportional differences between self-descriptive adjectives used more frequently by the experimentals

TABLE 3
PER CENT DIFFERENCES BETWEEN SELF-DESCRIPTIVE ADJECTIVES USED MOST FREQUENTLY
BY THE EXPERIMENTALS AND BY THE CONTROLS

Adjectives more frequently used by the experimentals		Adjectives more frequently used by the controls	
The adjective used	% Diff.	The adjective used	% Diff.
Anxious	52*	Contented	29
Suggestionable	37	Free	29
Afraid	34	Adjusted	28
Submissive	28	Useful	28
Sad	28	Active	22
Maladjusted	25	Happy	22
Imaginative	25	Sincere	21
Sensitive	25		
Jealous	25		
Distrustful	22		
Discontent	22		

* This statistic means, for example, that 52 per cent more of the experimentals used the word *anxious* to describe the actual self than did the controls.

and those used more frequently by the controls. The proportional differences reported in Table 3 are all 20 per cent or greater; the 20 per cent level of difference was arbitrarily selected as our cut-off point. A perusal of Table 3 reveals that the experimentals more frequently used adjectives which were unfavorable and clustered around ideas of discontentment, unhappiness, and uneasiness. Conversely, the controls selected more frequently adjectives which reflected ideas of self-worth, adjustment, contentment, and the like.

3. *The Ideal Self-Perceived-Actual Self Discrepancy Index*

Hetherington (10), Rogers (18), and other investigators (1, 2, 3, 12) have proposed that the greater the discrepancy between one's actual concept of self and his concept of his ideal self, the greater the personal maladjustment of the individual. If the *ACL* was a valid adjustment index, we expected that the magnitude of the ideal self-actual self discrepancies would tend to be greater among the experimentals than among the controls. The computation of this index included: (a) counting, word-by-word, the numbers of experimentals and controls who used each word to describe his actual self; (b) counting, word-by-word, the number of experimentals and controls who used each word to describe his ideal self; (c) determining the magnitude of

the discrepancies by subtracting the sum of the ideal-self adjectives chosen from the sum of the actual self adjectives chosen for each word within the two samples. It should be noted that these discrepancies are all in the same direction, that is, the discrepancies represent only those where the ideal-self sum was greater than the actual-self sum. Table 4 depicts the ideal self-actual self discrepancies and the magnitude of each discrepancy for the two

TABLE 4
IDEAL SELF-ACTUAL SELF DISCREPANCIES FOR THE EXPERIMENTAL AND CONTROL GROUPS

Experimentals ($N = 16$)		Controls ($N = 32$)	
Adjective used	Size of discrepancy	Adjective used	Size of discrepancy
Satisfied	7	Leader	8
Leader	7	Scientific	7
Virtuous	5	Artistic	5
Independent	5	Adorable	5
Artistic	5	Virtuous	5
Handsome	4	Superior	4
Adjusted	4	Precious	3
Superior	4	Intelligent	2
Contented	3	Handsome	1
Efficient	3	Enchanting	1
Adapted	3	Progressive	1
Scientific	3	Total Words	11
Adorable	3	Total Discrepancy	42
Heroic	2		
Intelligent	2		
Happy	2		
Precious	1		
Noble	1		
Strong	1		
Useful	1		
Valiant	1		
Enchanting	1		
Industrious	1		
Total Words	23		
Total Discrepancy	67		

samples. An analysis of this table shows that discrepancies occurred for more than twice as many adjectives among the experimentals than among the controls; and, that the magnitude of these discrepancies was greater among the experimentals than among the controls. These two results were true despite the fact that the control group was twice as large ($N = 32$) as the experimental group ($N = 16$).

4. *The Index of Self-Acceptance*

The concept of self-acceptance has previously been shown to be directly related to adjustment (22, 23). If the *ACL* was a valid index of adjustment,

we expected that the controls would tend to be more self-accepting than the experimentals. The index of self-acceptance, employing an *ACL*, was operationally defined by Sarbin and Rosenberg (20) as follows:

$$\text{Index of Self-Acceptance} = \frac{\text{No. of Favorable Adjectives Selected}}{\text{Total No. of Adjectives Selected}}$$

The results for this index were: The 16 experimentals employed 188 adjectives categorized as favorable in a total of 361 chosen to describe the actual self. The 32 controls used 443 adjectives categorized as favorable in a total of 612 chosen to describe the actual self. The indices of self-acceptance for the experimentals and controls were .52 and .72 respectively. Applying the Chi-square test to these data, Chi-square equalled 41 indicating that the controls were significantly more self-accepting ($p > .01$) than were the experimentals.

E. DISCUSSION

The use of personal indices, such as the *ACL*, as measures of adjustment and mental health involve several limitations. First, an individual attempting to identify his own self can only provide an approximation of his real or actual self at any given time. He can report, if willing and able, only that aspect of the actual self which is known to him. Secondly, as research reports of several investigators have demonstrated utilizing North American subjects (2, 4, 6, 12), the well-adjusted individual may tend to unconsciously enhance his self appraisal, whereas the more poorly-adjusted the individual, the more the tendency to be self-deprecatory. Whether or not this generalization holds for the Latin American subject is a matter for speculation. However, it should be clear that one's level of self-insight, irrespective of society, should tend to influence the validity of a subject's performance on tests similar to the *ACL*. Finally, as with all paper and pencil tests, the subject's willingness and honesty in revealing his concept of self directly effects the validity of the data reported.

In addition to the limitations associated with the instrument employed, there were also limitations in the methodological design of his study. The number of experimental subjects employed was small ($N = 16$), thus reducing the degree to which the results can be generalized to other populations. Finally, the subjects themselves were highly selected, and as compared to their non-university age mates in Puerto Rico, were probably more up-mobile, had a higher level of educational aspiration, and were from a higher social economic class, all things being equal.

Despite these various limitations, the results of this study demonstrated that

the *ACL* employed clearly distinguished between the neurotic and the healthier subjects. The fact that the technique "worked" merits its further investigation.

As we see it, the *ACL* possesses several distinct characteristics which may make it a potentially valuable cross-cultural index of adjustment. This test asks essentially for a subject to operationally define his personal, subjective concept of self; therefore, the face validity of the instrument is high. If we accept the postulates that the self-concept is cognized as an organization of qualities (5, 20) and that adjectives are linguistic symbols which enable subjects to communicate overtly about such qualities, then the *ACL* approach may be a value method for determining adjustment. If, in addition, the adjectives used possess psychological meaningfulness in terms of the mental health criteria used within the particular society where it is employed, the technique seems to meet the criterion of relevance. Finally, the cross-cultural study of the self-concepts of members of various cultures and societies may be a promising endeavor with significant implications for this area for, as numerous researchers working in various cultures have indicated (3, 5, 10, 16, 17, 20) the concept of self is a meaningful abstract construct common to individuals of many cultures and societies.

We hope that our colleagues in other parts of Latin America, particularly those associated with universities, will be interested in exploring the applicability of this device with subjects drawn from their own societies. To simplify replication, we have attempted herein to spell out the procedures used in detail.

F. SUMMARY

The aim of this brief paper has been to describe a Spanish adjectival check list adjustment index which might be employed on a cross-sectional basis. The check list clearly discriminated between the neurotic experimental subjects and the healthier controls for all four scoring indices employed: the indices of self-criticality, proportional differences, self-acceptance, and the ideal self-actual self discrepancy index. From our theoretical position, the *ACL* method appears to meet the criterion of relevance. In addition, the adjectival checking method possesses rational or logical validity. If linguistic pre-tests are made to compensate for colloquial usage and to adjust for the local psychological implications of the terms as employed in other societies, we would propose that the adjectival check list may be validly applied as an adjustment index to other Latin American societies.

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THE MENTAL PICTURES OF SIX HINDU CASTE GROUPS ABOUT EACH OTHER AS REFLECTED IN VERBAL STEREOTYPES*

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A. INTRODUCTION

"Stereotypes are socially conditioned habits of thought acquired by the people from the common stock of widely prevalent and readily available verbalised concepts" (2). They "take the form of generalisations concerning the members of a particular national group." "Unlike certain other generalisations however, stereotypes are based not on an inductive collection of data, but on hearsay, rumour, anecdotes—in short, on evidence which is insufficient to justify the generalisation. They are not grounded on objective facts, and as a consequence they represent a sort of 'autistic thinking' which is relatively unresponsive to external reality. They may occasionally contain some truth, but if they do so, it appears to be largely by chance" (1). This is the very reason why the stereotypes become so harmful. "It is not only possible but even highly probable, that unfavourable stereotypes concerning a particular nation constitute a fertile soil in which hostility may be more easily developed, although specific outbreaks may be precipitated by other factors. Hostility can obviously be generated more easily between two nations which hold unfavourable stereotypes regarding each other" (1). Realisation of this fact probably prompted the General Conference of Unesco in 1947 and 1948 to authorise the Director-General to promote studies on national stereotypes in connection with the Projects on Tensions Affecting International Understanding. Prof. Murphy initiated similar tension studies in India in 1950-51. The present study on caste stereotypes of six Hindu caste groups is a part of such tension study, in India. In order to take up any national and educational programme for the purpose of bringing about an emotional integration of the caste and linguistic groups stereotype studies are essential. The "pictures in our heads" of different Indian groups must be focussed before Psychological reorientation and repainting is attempted.

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B. PROBLEM

The six Hindu caste groups of the present investigation have been living together for centuries. The pictures they carry in their heads about the different caste groups may be due to certain social stimulus values inherent in the members of the caste groups or due to their own collective fantasies inherited through social conditioning like any other verbalised concepts or they may be due to a functional combination of both the processes. It would be highly interesting and socially useful to compare the mental pictures of the high and low caste Hindus towards each other and their own ideas about themselves.

C. SUBJECTS

Six important caste groups have been taken into consideration for this investigation. Three of them belong to high caste and the other three to low caste Hindu groups. Each group consists of 100 subjects selected by stratified quota sampling technique from the City of Cuttack. The three high caste Hindus consist of the Brahmins, the Karans, and the Khandaiyats, and the three low caste groups comprise the Dhobas (Washerman), the Panas (the landless labouring untouchables), the Hadies (the sweepers). The hierarchical position of the caste groups follows the same order as arranged above. A fuller description of the samples has been attempted elsewhere (3).

D. PROCEDURE

As in the other studies of Social Tension scheme all the low caste subjects were interviewed personally by the interviewers belonging to the same caste. The subjects of the upper castes were either interviewed or allowed to answer the questionnaire on their own (3). A list of 65 traits was selected after proper pre-test on a similar group. Many of these trait names or attributes were taken from a similar study made on college students and service holders of this State (2). After all the data were collected only 47 trait names were selected for discussion in this paper. The rest was ignored because some of them were not found to be relevant in such a study and some others were too obvious to be of any real significance in this context. For example, the traits like 'literate,' 'backward,' 'illiterate,' were so objective and real that they could not possibly be used as stereotypes. Out of 47 attributes 22 were favourable and 25 were unfavourable ones. Since the purpose of the study was more for intergroup comparison this slight difference in the number of two categories of traits might not be considered very important.

In a similar study as mentioned earlier (2) traits selected by 20 per cent of the subjects had been taken into consideration but in this study this level was

raised to 25 per cent in order to cut short the number of traits which otherwise became too large and unwieldy.

In Table 1 the attributes selected for each caste group by the low and high caste groups and by the members of the same caste have been given separately along with the percentage of responses. The attributes under each head have been arranged in order of the size of the responses. Table 2 gives the common attributes selected by the different caste groups for each of the six caste groups exactly in the similar manner. In Table 3 the ratios between the favourable and unfavourable attributes for each caste group have been presented to indicate the relative positions of the different caste groups in regard to the strength and relation of the favourable and unfavourable traits. To get the stereotype ratio which gives a relative idea of the direction or tendency of stereotyping, the number of favourable traits has been divided by the number of unfavourable traits. There is no well accepted methodological sanction behind this statistical measure. It merely gives a rough picture of the relative strength of the stereotype ratio of the six caste groups. This table also contains the number of favourable and unfavourable attributes and the average percentage of responses under each head for each of the caste groups separately for easy comparison.

E. RESULTS AND DISCUSSION

Table 1 presents all the trait names attributed to each of the caste groups by the low caste groups, by the high caste groups, and by the members of the same caste, under three separate heads. The traits have been arranged according to the order of preference and the percentage of responses has been noted against each of the traits. This Table does not require any further analysis. The results explain themselves.

In Table 2 all the 47 attributes which have been found from the various lists of attributes given in Table 1 have been presented for the six caste groups with the frequencies of occurrence in percentage under three different categories. For each caste the first column of figures stands for the percentage of responses made by the low caste groups, the second column for the high caste groups, and the third comprises the percentage of responses made by themselves. A glance at this table gives a clear picture of the pattern of trait distribution for the high and low caste groups. They clearly fall into two distinctly opposite areas of distribution. The first 24 traits are mostly for the high caste groups and the last 23 for the low caste groups. The mental pictures of the subjects of the high and low caste groups about each other appear to be sharply distinguished. Not only the judgments of the high

TABLE 1
ATTRIBUTES SELECTED BY THE DIFFERENT CASTE GROUPS IN ORDER OF SIZE OF RESPONSES

Attributes selected by the Harijan groups			Attributes selected by the High Caste Groups			Attributes selected by the subjects themselves		
Serial No. 1	Trait names 2	Percent- age of re- sponse 3	Serial No. 1	Trait names 2	Percent- age of re- sponse 3	Serial No. 1	Trait names 2	Percent- age of re- sponse 3
1. Greedy		90.3	1. Greedy		83.5	1. Sincere		85
2. Idle		85.6	2. Cultured		70	2. Religious		81
3. Cultured		81.6	3. Sincere		64	3. Greedy		79
4. Selfish		81	4. Religious		61.5	4. Cultured		77
5. Bribe taker		76	5. Selfish		56.5	5. Peace loving		76
6. Aspirant		75.3	6. Polished		49.5	6. Hospitable		72
7. Opportunist		75.3	7. Idle		48	7. Idealistic		70
8. Detestable		71	8. Diplomat		47	8. Gentle		70
9. Polished		68.6	9. Opportunist		46.5	9. Polished		63
10. Cheat		68	10. Gentle		46	10. Aspirant		62
11. Swindler		67	11. Aspirant		43	11. Calm		60
12. Rude		67	12. Crooked		42.5	12. Friendly		57
13. Gentle		65.6	13. Peace loving		41.5	13. Grave		54
14. Sincere		62.3	14. Idealistic		41.5	14. Diplomat		54
15. Traitor		61.3	15. Coward		40.5	15. Dutiful		54
16. Showy		60	16. Bribe taker		40	16. Coward		51
17. Formal		57.6	17. Wire puller		35	17. Idle		50
18. Idealistic		57.3	18. Cheat		32	18. Faithful		49
19. Grave		54.0	19. Friendly		29.5	19. Easily satisfied		41
20. Bluff		50.3	20. Formal		28.5	20. Artistic		31
21. Artistic		50	21. Dutiful		26.5	21. Selfish		28
22. Religious		48.0						
23. Wire puller		47						
24. Passionate		45						
25. Coward		44						
26. Cruel		45						
27. Bad		40.6						
28. Diplomat		39						

Brahmin

TABLE 1 (continued)

Attributes selected by the Harijan groups			Attributes selected by the High Caste Groups			Attributes selected by the subjects themselves		
Serial No.	Trait names	Percent- age of re- sponse	Serial No.	Trait names	Percent- age of re- sponse	Serial No.	Trait names	Percent- age of re- sponse
1	2	3	1	2	3	1	2	3
29.	Peace loving	35.5						
30.	Hospitable	30.5						
31.	Mean	29.6						
<i>Karana</i>								
1.	Swindler	81.6	1.	Showy	78.5	1.	Aspirant	83
2.	Aspirant	79.3	2.	Crooked	77.5	2.	Diplomat	78
3.	Bluff	77.3	3.	Formal	75.5	3.	Friendly	78
4.	Selfish	76.3	4.	Opportunist	73	4.	Gentle	77
5.	Bribe taker	76.0	5.	Selfish	71	5.	Formal	69
6.	Traitor	75.6	6.	Wire puller	70	6.	Wire puller	68
7.	Showy	74.3	7.	Bluff	68.5	7.	Hospitable	68
8.	Cheat	73.6	8.	Aspirant	65.0	8.	Showy	67
9.	Opportunist	71.0	9.	Diplomat	63.0	9.	Cultured	67
10.	Formal	70.6	10.	Swindler	59	10.	Polished	66
11.	Idle	69.0	11.	Traitor	59	11.	Idealistic	66
12.	Diplomat	68.0	12.	Gentle	55.5	12.	Bluff	63
13.	Artistic	66.3	13.	Friendly	55.0	13.	Grave	62
14.	Idealistic	65.6	14.	Cheat	53.5	14.	Crooked	62
15.	Polished	64.3	15.	Polished	51.5	15.	Artistic	58
16.	Greedy	64.3	16.	Passionate	40.5	16.	Opportunist	56
17.	Cultured	64.0	17.	Idealistic	38.5	17.	Bribe taker	55
18.	Wire puller	63.3	18.	Artistic	37.5	18.	Selfish	48
19.	Cruel	63.0	19.	Greedy	36.5	19.	Idle	47
20.	Rude	62.3	20.	Cultured	36	20.	Peace loving	46
21.	Gentle	62.0	21.	Hospitable	32	21.	Religious	42
22.	Grave	60.3	22.	Idle	30	22.	Dutiful	39
23.	Crooked	60.3	23.	Grave	28.5	23.	Passionate	37
24.	Friendly	56.0				24.	Traitor	36
25.	Passionate	46.6				25.	Cheat	33
26.	Sincere	41.0				26.	Calm	33

TABLE 1 (continued)

Attributes selected by the Harijan groups			Attributes selected by the High Caste Groups			Attributes selected by the subjects themselves		
Serial No.	Trait names 2	Percent- age of re- sponse 3	Serial No.	Trait names 2	Percent- age of re- sponse 3	Serial No.	Trait names 2	Percent- age of re- sponse 3
27.	Peace loving	37.5				27.	Swindler	32
28.	Bad	35.6				28.	Sincere	29
29.	Rowdy	34.3				29.	Brave	28
30.	Religious	32.6				30.	Mean	27
31.	Hospitable	30.0						
32.	Calm	30.0						
<i>Khandaiyat</i>								
1.	Idle	70	1.	Brave	71.5	1.	Brave	81
2.	Aspirant	70	2.	Rowdy	54	2.	Hospitable	72
3.	Opportunist	70	3.	Industrious	51	3.	Gentle	59
4.	Cruel	69	4.	Dutiful	46.5	4.	Dutiful	58
5.	Selfish	67.0	5.	Gentle	36.5	5.	Industrious	56
6.	Rude	64.0	6.	Rude	35	6.	Faithful	54
7.	Crooked	63.6	7.	Friendly	34.5	7.	Grave	53
8.	Swindler	63.3	8.	Cruel	33	8.	Aspirant	51
9.	Formal	62.6	9.	Polished	32	9.	Idealistic	50
10.	Diplomat	62.3	10.	Aspirant	31	10.	Religious	49
11.	Cultured	62.0	11.	Passionate	29.5	11.	Friendly	49
12.	Bribe taker	60.3	12.	Idealistic	29	12.	Rowdy	45
13.	Artistic	60.3	13.	Faithful	26.5	13.	Peace loving	37
14.	Gentle	60.3				14.	Artistic	36
15.	Polished	59.3				15.	Cultured	33
16.	Idealistic	59.3				16.	Formal	33
17.	Cheat	59.0				17.	Easily satisfied	33
18.	Traitor	58.3				18.	Rude	31
19.	Bluff	56				19.	Passionate	31
20.	Friendly	56				20.	Sincere	30
21.	Greedy	54.6				21.	Polished	29
22.	Showy	54				22.	Calm	27
23.	Passionate	50.6						
24.	Bad	49.6						

TABLE 1 (continued)

Attributes selected by the Harijan groups			Attributes selected by the High Caste Groups			Attributes selected by the subjects themselves		
Serial No.	Trait names	Percent-age of response	Serial No.	Trait names	Percent-age of response	Serial No.	Trait names	Percent-age of response
1	2	3	1	2	3	1	2	3
25. Rowdy		48.3						
26. Brave		46						
27. Sincere		44.5						
28. Coward		41						
29. Wire puller		41.0						
30. Bad		34.6						
31. Hospitable		34.5						
32. Religious		31.5						
33. Faithful		27						
<i>Dhoba</i>								
1. Ugly		92.0	1. Industrious		63.0	1. Innocent		85.0
2. Industrious		89.0	2. Drunkard		55.0	2. Industrious		83.0
3. Innocent		82.0	3. Innocent		44.3	3. Dutiful		75.0
4. Unintelligent		80.0	4. Unintelligent		34.6	4. Faithful		71.0
5. Drunkard		79.0	5. Dutiful		34.3	5. Calm		67.0
6. Discourteous		75.0	6. Ugly		32.0	6. Peace loving		65.0
7. Easily satisfied		73.5	7. Discourteous		29.5	7. Hospitable		63.0
8. Faithful		69.0	8. Easily satisfied		28.3	8. Inefficient		60.0
9. Dutiful		66.5				9. Friendly		58.0
10. Hospitable		64.5				10. Discourteous		53.0
11. Inefficient		60.0				11. Easily satisfied		52.0
12. Calm		59.5				12. Drunkard		49.0
13. Mean		58.5				13. Religious		46.0
14. Distastable		57.5				14. Gentle		46.0
15. Religious		56.5				15. Ugly		44.0
16. Peace loving		54.5				16. Unintelligent		42.0
17. Brave		53.5				17. Formal		39.0
18. Bad		50.5				18. Brave		39.0
19. Passionate		47.5				19. Idealistic		35.0
20. Coward		40.0				20. Mean		35.0

TABLE 1 (*continued*)

Attributes selected by the Harijan groups			Attributes selected by the High Caste Groups			Attributes selected by the subjects themselves		
Serial No.	Trait names	Percent- age of re- sponse	Serial No.	Trait names	Percent- age of re- sponse	Serial No.	Trait names	Percent- age of re- sponse
1	2	3	1	2	3	1	2	3
2.	Innocent	83.5	2.	Ugly	49.3	2.	Ugly	95
3.	Unintelligent	76.0	3.	Innocent	47.6	3.	Unintelligent	93
4.	Ugly	75.0	4.	Industrious	47.6	4.	Innocent	90
5.	Drunkard	73.0	5.	Unintelligent	43.3	5.	Discourteous	89
6.	Inefficient	72.0	6.	Detestable	39	6.	Drunkard	83
7.	Discourteous	70.0	7.	Easily satisfied	38.3	7.	Easily satisfied	82
8.	Easily satisfied	64.0	8.	Dutiful	30.5	8.	Hospitable	81
9.	Dutiful	62.5	9.	Mean	27.5	9.	Faithful	78
10.	Detestable	61				10.	Religious	78
11.	Mean	58.5				11.	Dutiful	75
12.	Hospitable	58.5				12.	Detestable	72
13.	Faithful	55.5				13.	Brave	70
14.	Peace loving	53				14.	Mean	69
15.	Calm	52.5				15.	Calm	65
16.	Friendly	51.5				16.	Inefficient	63
17.	Coward	50.5				17.	Peace loving	60
18.	Rowdy	44.5				18.	Bad	57
19.	Passionate	44				19.	Sincere	57
20.	Brave	43.5				20.	Rowdy	54
21.	Religious	41.5				21.	Passionate	44
22.	Bad	40.5				22.	Showy	37
						23.	Coward	31
						24.	Bluff	29
						25.	Friendly	26

TABLE 2 (continued)

[illegible]

TABLE 2 (continued)

Sl. Trait No. names	D Dhobas Percentage of responses made by the			E Panas Percentage of responses made by the			F Hadies Percentage of responses made by the		
	2 low caste groups 1	3 high caste groups 2	Dhobas 3	2 low caste groups 1	3 high caste groups 2	Panas 3	2 low caste groups 1	3 high caste groups 2	Hadies 3
1. Greedy									
2. Idle									
3. Cultured									
4. Selfish									
5. Aspirant									
6. Polished						30.0			
7. Gentle			46.0						
8. Sincere									
9. Idealistic			39.0						57.0
10. Diplomat									
11. Bribe taker						53.0			
12. Opportunist		50.5							
13. Cheat									
14. Formal			39.0						
15. Wire puller						37.0			
16. Grave									
17. Artistic									
18. Swindler									
19. Rude									
20. Traitor									
21. Showy									37.0
22. Bluff									29.0
23. Crooked	58.5								
24. Cruel					31.3	37.0			
25. Religious	56.5		46.0	57.5		47.0	41.5		78.0
26. Coward	40.0		31.0	40.0		56.0	50.5		31.0

TABLE 2 (continued)

Sl. No.	Trait names	D Dhobas			E Panass			F Hadies		
		Percentage of responses made by the 2 low caste groups	Percentage of responses made by the 3 high caste groups	Dhobas 3	Percentage of responses made by the 2 low caste groups	Percentage of responses made by the 3 high caste groups	Panass 2	Percentage of responses made by the 1 low caste groups	Percentage of responses made by the 2 high caste groups	Hadies 3
27.	Peace loving	54.5		65.0	56.0			53.0		60.0
28.	Friendly			58.0	40.0			51.5		26.0
29.	Hospitable	64.5		63.0	67.0			58.5		81.0
30.	Calm	59.5		67.0	59.0			52.5		65.0
31.	Bad							40.5		57.0
32.	Mean			35.0	59.5			58.5	27.5	69.0
33.	Dutiful	66.5	34.3	75.0	68.5			61.0	30.5	75.0
34.	Detestable	57.5		31.0	58.5	33.3		61.0	39.0	72.0
35.	Passionate	47.5			38.0				44.0	
36.	Faithful	69.0		71.0	65.0			58.5		78.0
37.	Easily satisfied	73.5	28.3	52.0	67.0	36.3		64.0	38.3	82.0
38.	Rowdy				42.5	38.6		44.5		54.0
39.	Brave	53.5		39.0	55.5			43.5		70.0
40.	Faithful									96.0
41.	Industrious	89.0	63.0	83.0	84.5	51.3		86.5	47.6	
42.	Innocent	82.0	44.3	85.0	86.5	42.6		83.5	47.6	90.0
43.	Unintelligent	80.0	34.6	42.0	76.5	43.3		76.0	43.3	93.0
44.	Ugly	92.0	32.0	44.0	78.6	56.3		75.0	49.5	59.0
45.	Drunkard	79.0	55.0	49.0	74.0	65.6		73.0	68.5	83.0
46.	Inefficient	60.0		60.0	71.0	31.0		72.0		63.0
47.	Discourteous	75.0	29.5	53.0	78.5	40.6		70.0		89.0

and low caste groups conform to this pattern but the judgments made by the different castes for themselves also approximately conform to the general pattern. This is rather interesting. The age old intercaste relationship seems to have cast almost similar pictures in the minds of all the caste groups and determined the self judgment of one's own self. This is a global picture of the situation.

TABLE 3
NUMBER OF TRAIT NAMES AND RATIOS BETWEEN FAVOURABLE AND UNFAVOURABLE TRAITS FOR THE DIFFERENT CASTE GROUPS

Selected by the 1	No. of favourable traits 2	No. of unfavourable traits 3	Total No. of traits 4	Average score in percentage 5	Trait Ratio 6
<i>Brahmin</i>					
3 low caste groups	14	18	32	58.8	0.78
2 high caste groups	12	9	21	46.3	1.33
Brahmins themselves	18	4	22	60.2	4.50
<i>Karan</i>					
3 low caste groups	15	17	32	59.5	0.88
2 high caste groups	11	12	23	55.5	0.92
Karans themselves	17	13	30	54.0	1.30
<i>Khandaiyat</i>					
3 low caste groups	14	19	33	54.2	0.74
2 high caste groups	9	4	13	38.8	2.25
Khandaiyats themselves	19	3	22	45.3	6.33
<i>Dhoba</i>					
2 low caste groups	10	10	20	65.4	1.00
3 high caste groups	4	4	8	38.9	1.00
Dhobas themselves	14	8	22	53.3	1.75
<i>Pana</i>					
2 low caste groups	11	11	22	62.3	1.0
3 high caste groups	3	8	11	42.7	0.38
Panas themselves	11	13	24	61.4	0.85
<i>Hadi</i>					
2 low caste groups	11	11	22	60.0	1.0
3 high caste groups	4	5	9	41.7	0.80
Hadies themselves	12	13	25	66.4	0.92

Table 3 presents the number of favourable and unfavourable traits, the average percentage of responses, and the trait ratios between the favourable and unfavourable traits for each of the caste groups selected by the high and low caste groups and by the subjects for themselves in three separate categories. Leaving aside the few exceptions almost all the traits selected by the three low caste groups for each of the three high caste groups are the same. The total number of traits selected for each of these groups is about the same. There is not much difference in the favourable and unfavourable trait ratios obtained for the three high caste groups. It is 0.78 for the Brahmins, 0.88 for the Karans, and 0.74 for the Khandaiyats. In the average of responses for the groups there is also no great difference. The maximum difference

between the highest scores for the Karans and the lowest scores for the Khandaiyats is 5.3 per cent. These results along with the trait names of Table 2 go to show that the low caste groups have more or less the same stereotyped mental pictures for all the three high caste Hindus. The number of unfavourable traits is always larger than the number of favourable traits for any of the high caste Hindus.

The pattern of stereotyping the high caste Hindus by the high caste Hindus themselves is definitely different from that of the low caste Hindus. The trait ratio of 2.25 is the highest for the Khandaiyats compared to 1.33 and 0.92 for the Brahmins and Karans respectively. Not only the ratio for the Karans is the lowest but the number of unfavourable traits for this group being 12 out of total 23 is also the largest. The average percentage of responses is also the highest for this group. This indicates greater animosity for the Karans and the least for the Khandaiyats. The Karans being the newly rising and competing social group among the three high caste groups is probably disliked more by the other two high caste groups. The Khandaiyats being less advanced get the lowest score and the highest ratio. The Brahmins who have been all the time in ascendance occupies the middle position.

A similar picture is also noticed in regard to self judgment of the three high caste groups. The Khandaiyats have the highest ratio of 6.33 whereas the Karans have the lowest ratio of 1.30 and the Brahmins having 4.50 come in between the two. The Karans not only have the lowest ratio but have also the largest number of bad as well as total number of traits. Why the Karans have selected 13 unfavourable traits for themselves where the Brahmins and Khandaiyats have selected only 4 and 3 respectively it is difficult to answer. They are obviously more critical of themselves than any other group. They seem to have competed with all the other caste groups in attributing the same unfavourable traits to themselves. This is rather interesting.

Among the three low caste groups the Dhobas occupy a higher social as well as caste rank than the other two. The results given in Table 2 seem to confirm this position. The ratio of favourable and unfavourable traits for this group selected by the high caste Hindus being 1.0 is the highest compared to 0.80 and 0.38 for the Hadies and Panas respectively. The number of bad traits and the percentage of average scores for them are also the smallest of all. The ratio of self judgment of the Dhobas is the largest among those of the low caste groups. It is larger than that of the Karans. Compared to Karans and other Harijan groups the Dhobas seem to have a greater sense of class superiority. Economically, socially, educationally, and

caste hierarchical points of view, the Dhobas occupy a higher rank among the Harijans (3). This factor is obviously reflected in this study. The ratio for each of the three low caste groups as judged by the other two low caste groups is exactly the same. This ratio is 1.0 in all three cases. The self judgment ratios of the Hadies and Panas are 0.92 and 0.85 respectively. Out of all six such ratios these two are less than 1.0. Panas have selected a larger number of bad traits to good ones for themselves. The Hadies have selected 13 bad traits out of 25 and the Panas 13 out of 24 attributes. This clearly indicates a strong sense of inferiority and self abasement of these two Harijan groups. This again confirms the earlier findings in this connection (3, 4).

F. SUMMARY AND CONCLUSION

Six Hindu caste groups selected by stratified quota sampling technique served as subjects of this investigation. Each of the groups comprised 100 subjects. Out of these six caste groups three belonged to high caste Hindus namely the Brahmins, the Karans, and the Khandaiyats occupying the three hierarchically arranged social positions and the other three low caste groups namely the Dhobas (washerman), the Panas (landless untouchable labourers), and the Hadies (the sweepers) belonged to the Harijan or untouchable group. There is also a social gradation and hierarchy among the Harijan groups and they are arranged above according to this gradation.

Forty-seven trait names have been selected for study. There seem to be two distinct groups of traits selected for the high and low caste groups separately. The extreme caste distinction has manifested itself very clearly in the selection of attributes. Among the three high caste Hindus the Karans have been attributed the largest number of unfavourable traits by all the high and low caste groups as well as by the members of the Karan group itself.

Among the Harijan groups the Dhobas seem to have the largest trait ratio between the favourable and unfavourable traits. The higher social position of this group among the Harijan groups is well reflected in the selection of stereotypes. Like the upper caste Hindus they have a greater sense of caste superiority whereas the other two Harijan groups have selected more bad traits for themselves. This indicates a sense of caste inferiority and self abasement of the Pana and Hadi groups.

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THE COGNITIVE BACKGROUND OF SIX HINDU CASTE GROUPS REGARDING THE LOW CASTE UNTOUCHABLES*

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A. INTRODUCTION

"A belief is an enduring organisation of perceptions and cognitions about some aspect of the individual's world" (1). Any cognitive structure of an individual is likely to manifest itself in a particular situation either in the form of motor or verbal behaviour. It is not always easy to study systematically the motor behaviour of a person in different social situations. But "we can frequently gain much insight into an individual's beliefs and attitudes by placing him in various situations requiring momentary judgments." "A man's opinions will exhibit themselves in his momentary judgments; a series of judgments may eventually be consolidated into fixed opinions."

As part of the caste tension study (2) it is certainly pertinent to investigate the cognitive structures of the individuals forming the different caste groups. Study of attitudes and opinions forms also a very important part of this study. It is not always possible to introduce measurement differentiation in studying the attitudes, opinions, and beliefs so measurements for any of these psycho-social structures are likely to be overlapped and get mixed up. But one redeeming feature of all these studies is that they indicate the general trend or direction of a person's way of perception of social situations and his general "frame of reference" in regard to his psycho-social world.

B. SUBJECTS

Six important caste groups have been taken into consideration for this investigation. Three of them belong to high caste and the other three to low caste Hindu groups. Each group consists of 100 subjects selected by stratified quota sampling technique from the City of Cuttack. The three high caste Hindus consist of the Brahmins, the Karans, and the Khandaiyats, and the three low caste groups comprise the Dhobas (washerman), the Panas (the landless labouring untouchables), the Hadies (the sweepers).

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The hierarchical position of the caste groups follows the same order as arranged above. A fuller description of the samples has been attempted elsewhere (2).

C. PROCEDURE

As in the other studies in the social tension research scheme all the low caste Hindus were interviewed by the interviewers belonging to the same low caste Hindus. The subjects of the upper three castes were either interviewed by the investigators or allowed to answer the questionnaire by themselves if they so desired. There were 10 items of belief mainly connected with caste relationship. Nine out of 10 items were directly related to the beliefs associated with the social status of the low caste groups and only one was related to the economic problem which was indirectly connected with the same basic issue. Each of these 10 problems had been specified under four definite issues related to it. The subjects were asked to approve or disapprove these statements one by one. By this method it was presumed to spot out specifically the beliefs of the subjects.

An inter group comparison of the responses has been attempted in this paper. For easier understanding and comparison the responses of all the three upper caste groups have been averaged and compared with those of the average responses of the three lower caste Hindus. All the results have been presented in Table 1.

D. RESULTS AND DISCUSSION

The first four statements deal with the nature and causes of untouchability. The attitudes and responses to social reforms with a view to changing the existing caste structure will depend mainly on the inherent beliefs of the different castes which are likely to be vitally affected in the process. The first three items of the first statement describe a particular aspect of the problem of untouchability; 63.6 per cent of the upper caste groups believe that untouchability is an act against social well being but the untouchable groups hold just the contrary view; 60 per cent of them say 'no' to it. The majority of them seem to confirm and approve the existing caste system. The same pattern is also found when it is described as a serious superstition. Eighty per cent of the upper caste people condemn it as a superstition compared to 58.6 per cent of the lower groups. More of the upper caste people also consider it as an illegal act. These data unmistakably indicate that the upper caste people are more liberal and more against untouchability than the untouchables themselves.

Item 4 of Question 1 and all other items of the next three questions

TABLE 1
PERCENTAGE OF RESPONSES OF SIX CASTE GROUPS IN THE STUDY OF BELIEFS

Serial No.	Problems and Specific issues	Response categories	Brahmin 1	Karan 2	Khandayat 3	Total	Dhoba 4	Pana 5	Hadi 6	Total
1.	Is untouchability									
	(a) an act against social well being?	Yes	62	67	62	63.6	33	37	48	39.3
		No	33	28	33	31.3	67	63	50	60
	(b) a serious superstition in us?	Yes	76	79	86	80.3	52	58	66	58.6
		No	20	19	11	16.6	48	42	33	41
	(c) an illegal act?	Yes	50	58	58	55.3	53	46	26	41.6
		No	38	33	36	35.8	45	54	73	57.3
	(d) due to low occupation?	Yes	57	60	58	58.3	53	39	67	53
		No	35	36	36	35.6	47	61	33	47
2.	Should a man become untouchable									
	(a) by birth from the Harijan parents?	Yes	33	34	33	33.3	24	32	27	27.6
		No	59	59	61	59.6	76	68	72	72
	(b) due to their nasty habits?	Yes	79	75	79	77.6	55	49	83	62.3
		No	16	19	18	17.6	43	51	16	36.6
	(c) for some particular habits and behaviours?	Yes	75	72	76	74.3	75	56	81	70.6
		No	17	23	19	19.6	24	43	18	28.3
	(d) in accordance with religion and scriptures?	Yes	49	49	61	53	65	47	57	56.3
		No	46	42	34	40.6	34	53	43	43.3

TABLE 1 (Continued)

Serial No.	Problems and Specific issues	Response categories	Brahmin 1	Karan 2	Khandayat 3	Total	Dhoba 4	Pana 5	Iladi 6	Total
3.	Untouchability arises									
	(a) out of God's will?	Yes	17	9	12	12.6	23	31	21	25.0
		No	76	84	83	81.0	77	69	78	74.6
	(b) out of the bad manners in the society?	Yes	73	70	71	71.3	66	57	74	66.0
		No	21	28	26	25.0	33	42	26	33.6
	(c) out of inferiority to all the higher castes in intelligence?	Yes	33	41	41	38.3	68	44	78	63.3
		No	58	49	54	53.6	32	56	22	36.6
	(d) out of the unlawful acts of the upper castes?	Yes	64	79	79	74.0	86	59	81	75.3
		No	30	15	20	21.6	12	41	18	23.6
4.	Man becomes untouchable									
	(a) by sheer bad luck?	Yes	15	13	14	14	12	24	19	18.3
		No	77	79	83	79.6	87	76	80	81.0
	(b) due to the deeds of his past life?	Yes	21	25	21	22.3	34	40	41	38.3
		No	70	69	75	71.3	64	60	57	60.3
	(c) by tradition?	Yes	65	69	72	68.6	81	61	78	73.3
		No	25	24	25	24.6	18	39	22	26.3
	(d) by the influence of the society	Yes	83	86	88	85.6	80	55	79	71.3
		No	15	12	11	12.6	19	45	21	28.3

TABLE 1 (Continued)

Serial No.	Problems and Specific issues	Response categories	Brahmin 1	Karan 2	Khandayat 3	Total	Dhoba 4	Pana 5	Hadi 6	Total
5.	Should we touch these men									
	(a) A Harijan?	Yes No	85 11	90 6	80 13	85 10	91 8	72 27	85 14	82.6 16.3
	(b) A man who cleans refuse and night soil?	Yes No	74 19	84 12	81 17	79.6 16.0	93 7	70 29	82 18	81.6 18.0
	(c) The driver of a night soil van?	Yes No	76 17	90 7	83 15	83 13	95 5	72 27	81 17	82.6 16.3
	(d) When a Brahmin is going to a temple for worship?	Yes No	37 56	31 65	46 51	38 57.3	71 29	55 44	69 29	65 34
6.	Should we keep people as untouchables if they take,									
	(a) Ham	Yes No	51 42	42 54	33 63	42 53.0	81 18	45 55	58 42	61.3 38.3
	(b) Beef	Yes No	59 37	53 46	55 43	55.6 42.0	73 26	52 48	76 20	67.0 31.3
	(c) Mutton	Yes No	16 72	12 83	14 78	14.0 77.6	76 24	44 56	12 87	44.0 55.6
	(d) Alcohol	Yes No	66 31	60 37	56 41	60.6 36.3	71 28	45 54	46 53	54.0 41.3

TABLE 1 (Continued)

Serial No.	Problems and Specific issues	Response categories	Brahmin 1	Karan 2	Khandayat 3	Total	Dhoba 4	Pana 5	Hadi 6	Total
7.	Can social progress and unity be achieved by the following way?									
	(a) If the lower caste people live in a separate colony?	Yes No	26 67	18 76	20 73	21.3 72.0	18 76	24 71	17 81	19.6 76.0
	(b) By persuading them to be loyal to their traditions?	Yes No	46 44	53 41	48 46	49.0 43.6	59 36	41 55	16 82	38.6 57.6
	(c) By spreading general education among them?	Yes No	93 2	91 3	93 3	92.3 2.6	81 17	71 28	82 17	78.0 20.6
	(d) By establishing a real casteless society?	Yes No	74 20	79 18	72 22	75.0 20.0	68 28	63 33	75 22	68.6 27.6
8.	Do you think that									
	(a) man's self regard should be maintained?	Yes No	97 3	91 6	93 3	93.6 4.0	95 1	84 13	95 3	91.3 5.6
	(b) every type of labour should have dignity?	Yes No	97 0	93 5	97 1	95.6 2.0	93 2	79 18	95 3	89.0 7.6
	(c) All classes of people should work together forgetting their castes and creeds?	Yes No	93 4	91 6	93 3	91.6 4.3	92 8	81 18	92 8	88.3 11.3

TABLE 1 (Continued)

Serial No.	Problems and Specific issues	Response categories	Brahmin 1	Karan 2	Khandayat 3	Dhoba 4	Pana 5	Hadi 6	Total
9.	The class-less and caste-less society is possible (a) only by revolution (b) by gradual progressive social reforms (c) by economic equality (d) not at all possible in India	Yes No Yes No Yes No Yes No	19 57 74 12 62 18 28 51	20 64 83 7 68 20 38 53	20 75 67 12 59 21 37 49	15 71 79 8 72 14 37 61	38 57 53 23 43 35 43 56	14 80 77 17 81 13 48 50	22.6 69.3 69.6 16.0 65.3 20.6 42.6 55.6
10.	Do you think if the people of lower castes forcibly try to be equal in all fields with the people of Upper castes, (a) the social security and peace will be at stake? (b) the dissatisfaction among people will grow more? (c) the clash between individuals instead of decreasing will grow more? (d) Social progress and achievements in the field of knowledge will be checked?	Yes No Yes No Yes No Yes No Yes No	78 21 79 19 70 22 47 49	73 26 72 24 70 27 52 44	65 31 62 31 53 36 40 52	25 72 23 74 40 48 40 57	23 73 37 57 20 51 27 62	25 71 63 35 52 40 12 86	24.3 72.0 41.0 52.0 37.3 46.3 26.3 68.3

make attempts to indicate the belief of the caste groups in regard to the various causes which may go to explain the origin of untouchability. Is it due to low occupation?; 58.3 per cent of the upper caste people believe it to be so compared to 53 per cent of the low caste samples. The great majority of both the groups does not believe that untouchability is either due to birth from the Harijan parents, or due to their nasty habits or due to some particular habit or behaviour or due to God's will, or by sheer bad luck or due to the deeds of past life. A large percentage of both the groups believe quite strongly that it is mainly due to bad manners in the society, by the unlawful acts of the upper castes, by tradition, and by the influence of the society. Although 56.3 per cent of the low caste groups and 53 per cent of the upper caste people believe that a man becomes untouchable in accordance with religious scriptures and 63.3 per cent of the former and 38.3 per cent of the latter hold the view that it results out of inferiority to all the higher castes in intelligence, yet the basic agreement and emphasis amongst them seems to be more on the social pressure and tradition than on any other single factor. This kind of belief is more amenable to change than any other belief based on the assumption that untouchability is related more to the genetic or any other inherent biological or mental defects and deficiencies. The belief of the majority of low caste people that it is due to inferior intelligence indicates only their inferiority complex which is noticed over and over again in this research (2). Rather it is surprising that even now 38.3 per cent of the upper caste people still believe that untouchability is due to inferior intelligence. The radical social reformers may still consider it as a big reactionary group, but considering the century old Indian tradition many will welcome it as a redeeming feature of the modern caste structure in India.

Statement 5 makes a query whether they should touch a Harijan, a man who cleans refuse and night-soil, a driver of a night-soil van, and a Brahmin while going to a temple for worship. The great majority of both the groups seem to have no objection in touching the first three types of people but in regard to the last one which refers to a Brahmin going to a temple for worship, 65 per cent of the lower caste people want to touch them whereas only 38 per cent of the upper caste people wish to do so. In this matter the lower caste people seem to assert their right in a rather aggressive way. Because when the upper caste people do not wish to touch a Brahmin in a situation connected with well accepted rituals of Hindu worship, 65 per cent of the Harijans—none of whom is ever allowed to touch the Brahmins in ordinary situations and specially when a Brahmin will be going to worship,

—express their desire that they should touch him even in that situation. This might indicate a sort of revengeful spirit in the Harijans.

Now that untouchability has become a criminal offence according to the law of the country it is a good thing that the inner belief of the caste groups in regard to untouchability in the literal sense is fast disappearing. The responses to the above mentioned statements offer a clear evidence to this effect.

In India there is still a great deal of bad feeling in regard to beef and ham eating and drinking of alcohol. Some of the low caste people such as Hadies and Panas eat beef and ham and drink frequently. Some upper caste people, particularly the middle caste people, very strongly disapprove their conduct and this is one of the reasons why the beef and ham eaters are considered as untouchables. As a self reformatory measure the low caste groups are also discouraging this habit in their communities. So as a reaction to this 61.3 and 67 per cent of them would like to associate untouchability with ham and beef eating respectively whereas 42 and 55.6 per cent of the upper caste people seem to associate ham and beef eating with the untouchables respectively. In regard to drinking more of the upper caste people disapprove this compared to the 54 per cent of the lower caste groups. The unbalanced response of the lower caste groups is also noticed in regard to mutton eating which is quite common among all the castes in this part of the country. So the upper caste people are quite reasonable in this regard. When 44 per cent of the lower caste groups would also like to associate mutton eating with untouchability only 14 per cent of the upper caste people would like to take it as an undesirable trait of the Harijans. In all four cases the percentage of disapproving Brahmins is the largest among the upper caste groups. From among the lower castes more of the Dhobas seem to dislike drinking and ham and mutton eating. So in regard to beef and ham eating and drinking there is still a great deal of emotional tension and ill feeling.

The next four items deal with the suggestions of remedy. Most of the people of both the communities do not believe that social unity and progress can be achieved by segregation of castes in separate colonies. Rather the surprising thing is that about 20 per cent of both the castes still believe in caste segregation. In other words even now one in five prefers the old system of segregation; 49 per cent of the upper castes and 38.6 per cent of the lower caste people would like to persuade the lower caste people to stick to their traditional occupations but when the question of social progress is visualised through the spread of general education or by establishing classless society more of the upper caste people are in favour of this. As much as

90 per cent of them are in favour of spreading general education compared to 78 per cent of the lower caste samples; 75 per cent of the former want classless society as against 68.6 per cent of the latter. In fact more of the lower caste people are expected to be in favour of it. There seems to be some confusion in the minds of people in this field. Those who want to maintain the traditional way of life may not be in favour of more education among the Harijans and classless society but in this regard a section of the population seems to be confused. While in one breath they want to be traditional in another breath they want classless society. Any way a large section seems to have a consistent belief in regard to this problem.

Statement 8 deals with the question of human dignity and equality irrespective of caste and creed. About 90 per cent of both the castes believe that man's self regard should be maintained, every type of labour should have dignity, and all classes of people should work together forgetting their caste and creed. There is not much difference between the castes in regard to this issue.

Question 9 has been formulated to ascertain by what means classless and casteless society is possible; 69.3 per cent of the lower and 65.3 per cent of the upper caste people reject the idea of a revolution by which casteless and classless society can be brought about. Consistent with this belief 69.6 per cent of the former and 74.6 per cent of the latter believe in gradual progressive social reforms and about the same percentage of both the groups believe it to be possible by economic equality. But at the same time there are quite a few from both the communities,—42.6 per cent from the lower and 34.3 per cent from the upper castes—who believe that classless and casteless society is not at all possible in India. Here also there seems to be some confusion in the minds of some people in regard to this problem. Those who believe strongly that by progressive social reforms and by economic equality classless and casteless society can be brought about should not also say that it is not possible. It is also possible to think that some people might believe that by these means classless society can be achieved but at the same time they might believe that such reforms can not be brought about quite effectively in India; so classless and casteless society is not possible here. Both the views may be held at the same time but this merely indicates lack of conviction in some people of the samples. But one thing is unmistakably noticed, that people have greater confidence in reforms rather than in revolution.

When they are asked to give their views on the possible consequences if the people of the lower castes forcibly try to be equal in all fields with the people of upper castes the upper caste people react rather violently;

72 per cent of them think that social security and peace will be at stake but 72 per cent of the lower caste people do not think this way. Consistent to this belief 71 per cent of the upper caste people believe that when this happens the dissatisfaction among people will grow more and more. It is expected that those of the Harijans who do not hold the first view should not also support this view. But 41 per cent of them have become quite realistic and support this view also. As expected, almost a similar trend is also noticed in regard to the fourth consequence which suggests that clash between the individuals instead of decreasing will grow more and more. If the lower caste people forcibly try to be equal with the upper caste people will it check the social progress and achievement in the field of knowledge?; 68.3 per cent of the lower caste people do not think that it would but the upper caste people are almost equally divided amongst themselves on this point.

When most people of both the castes do not believe in revolution to bring about social changes they should consistently evince peaceful attitudes towards other issues also. But when a direct question is put like the last one the lower caste people show their aggressive fervour which is hidden when there is an academic and unemotional reference to revolutionary and peaceful means of solution. Indians are so used to open talks of peace and evolution that when a direct question on that problem is asked they are not likely to advocate force but the oppressed people do not seem to be consistent in this regard in all situations. The last question seems to indicate such an inconsistency in their cognitive structure.

E. SUMMARY AND CONCLUSION

Three high and three lower caste Hindu groups were asked to express their views on certain problems supposed to tap their belief structures. Each of the caste groups had 100 subjects. Ten important social issues dealing with caste relations were formulated each having four interrelated items. The subjects were required to express their approval or disapproval in regard to all these items.

The great majority of both the high and lower caste Hindus did not believe that untouchability was either due to birth from the Harijan parents, or due to their nasty habits or particular behaviour, or due to God's will, or due to the deeds of past life, or by sheer bad luck. Rather they believe quite strongly that it was mainly due to the unlawful acts of the upper caste people, tradition, and other social factors. This kind of belief was more amenable to change than any other belief in the genetic or any other inherent biological or mental defects and deficiencies of the untouchables.

The belief in educational equality and in establishing a classless and casteless society which would ultimately help the low caste people more than the upper castes seemed to be more widespread among the upper caste people. This confirmed the previous findings that upper caste people were more progressive than the lower caste people in regard to casteless society. In spite of this liberalism of the upper castes and the anxiety of the lower castes for their social upliftment about 20 per cent of both the castes still believed that the low caste people should be segregated.

Most of the people of the low and high caste groups did not believe in sudden and revolutionary changes in regard to caste relations. They seemed to prefer slow and peaceful methods in solving these problems. But under some situations the low caste people showed an unmistakable trend of aggression which was probably hidden under other situations.

In regard to certain caste beliefs there seemed to be some amount of inconsistency and confusion in the minds of a section of these samples. This was not unexpected. They were probably not able to resist the progressive ideas and ideologies of modern times but at the same time it was becoming pretty difficult for them to give up their age old beliefs and superstitions. This conflict had clearly manifested itself in some of their responses. But in spite of this conflict and confusion the general tendency seemed to be in the favourable direction of progressive social changes in caste structure.

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POLYGyny AND SOCIAL STATUS IN IRAN*

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A. INTRODUCTION

Little systematic information has been collected on the demographic and social correlates of polygyny. Iranian folklore describes the polygynous condition as the ideal of luxurious living. To be perfectly happy one must have a wife to satisfy every want: a Tabrizi to cook, an Esfahani to manage the household, a Tehrani for social functions, and a Shirazi for intimate companionship. Among sociologists also the most popular thesis is that "polygyny is a device for validating high status . . . additional wives are taken because they give a man prestige, much as do material possessions in our own society" (5). Like material possessions, wives may be good economic investments (1), as well as luxury items. "The two main incentives to polygamy are probably the prestige and amenities enjoyed by polygamous husbands, who are restrained from taking several wives only by economic reasons, and the economic reason of the levirate" (4). Evidence that the levirate, the custom of marrying one's deceased brother's wife, probably accounts for a minority of cases of polygyny was cited by Muhsam (4).

While most writers on polygyny either state (5) or imply (4) that within a culture polygyny is positively related to socio-economic status, data are either lacking or ambiguous. Fortes (3) presented data from Ashanti showing more polygyny for "big traders" and native administrative officers than for other occupations, but there is essentially no difference in the per cent of polygynous wives between farmers and petty traders and the several occupational groups Fortes cited as having a higher standard of living. Busia (1) found the incidence of polygyny nearly as high in urban as rural areas of the Gold Coast.

In a census of the Iranian employees of the Iranian Oil Refining Company

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data were gathered on the incidence of polygyny and some of its correlates. The present study will relate the incidence of polygynous marriages to status in the oil company, to the ownership of certain luxury items, and to education.

B. METHOD

Census interviewing was done by Iranian company employees chosen as literate in Farsi, fluent in the minority languages of southwest Iran, trustworthy with confidential information, and familiar with the employees in particular departments. These enumerators were given one week of training in the purpose and techniques of census interviewing. Census interviewing was done from February through March of 1956. The census covered all Iranians who are regularly and directly employed by the Company, with the exception of 319 (just over 1 per cent) who were physically unavailable at the time of the enumeration. Only the 24,819 married Moslem male direct employees of the Iranian Oil Refining Company who were interviewed personally will be considered in this report. In order to control for differences in the age distributions of the various groups compared, all comparisons will involve age-specific polygyny rates. The present study, being descriptive rather than hypothesis-testing, will not employ tests of statistical significance of differences. Because differences in polygyny rates are small and involve extreme proportions, few individual differences will be statistically significant, even with the large numbers available. Significance would more easily be obtained by a sign test of the consistency of direction of differences.

C. RESULTS

The relationship between polygyny and grade within the oil company is shown for each age group in Table 1. The sharpest status differentiation is between "staff" and "labor." The upper status group is staff. Theoretically, staff perform white collar work requiring academic education. The lower status group is labor. This pool of employees assigned to physical work is divided into three classes differentiated by salary and type of work. The upper class within labor contains "Ostad-kar," those who direct the work of the other labor. The middle and largest class within labor contains "skilled labor," including trainees for skilled labor positions. The lowest class in the company contains "unskilled labor."

There appear to be three relationships between polygyny and status: (a) an increase in polygyny with increase of grade within the three labor classes, (b) a decrease in polygyny with increase of grade from labor to staff within the younger age groups, and (c) an increase in polygyny with increase of grade from labor to staff within the older age groups. It seems likely that

within labor the economic power bestowed by higher position within the company enables more men to have polygynous marriages. Although this tendency must also exist in staff, any influence toward polygyny is countered by the education required for these positions (see below). The requirement for education among staff has two notable exceptions which probably account for the high frequency of polygyny in older staff: (a) in the past when fewer Iranians were educated, job requirements were lower, and (b) shortly after the 1951 nationalization of the company many promotions were given to replace non-Iranian staff. Many of those promoted may have been senior ostad-kar who ordinarily would have remained labor. If this reasoning is correct, many of the older staff are essentially labor in education and tradition; it would not be surprising for them to employ the additional economic power of their staff positions to obtain additional wives in labor fashion.

TABLE 1
PER CENT OF MARRIED MALE MOSLEM *IORC* EMPLOYEES
OF SPECIFIC AGES WHO ARE POLYGYNOUS*

Age group	Staff	Company grade		
		Ostad-kar	Skilled labor	Unskilled labor
20-24	—	—	0.5	(0.8)
25-29	1.2	(6.1)	3.4	3.5
30-34	2.3	7.8	4.2	3.6
35-39	5.4	12.2	6.5	3.9
40-44	(4.4)	(9.5)	8.1	6.5
45-49	10.4	14.5	9.8	7.3
50-54	15.4	13.8	11.0	8.0
55-59	(18.1)	(12.6)	11.7	9.5
60-64	—	—	13.8	9.5

* Throughout this paper all per cents in tables are based on at least 100 cases. Those based on less than 200 are in parentheses.

Data were available on the ownership of six material luxuries, radios, washing machines, refrigerators, coolers, automobiles, and sewing machines, among the relatively homogeneous group of 15,455 married Moslem male skilled laborers. It was felt that the possession of such luxuries would be indicative of higher status and hence be related to the incidence of polygyny. Only two luxury items were reported owned by over .1 per cent of the skilled labor, radios and sewing machines. As shown in Table 2, there is no consistent difference in the per cent polygynous between those who owned either of these two items and those who did not. If ownership of a radio or sewing machine is indicative of a higher status, then these results are not consistent with the differences in polygyny related to grade in the company. It is apparent from Table 2 that the level of ownership of a radio or sewing machine does not increase with age in the same way as do grade in the company

and salary within a grade. Thus, the possession of a radio may be a better index of Westernization than of social status. The effect of Westernization is to weaken the traditional religious values which sanction polygyny, and to introduce a new set of values favoring monogamy.

TABLE 2
PER CENT OF MARRIED MALE MOSLEM *IORC* SKILLED LABOR OF SPECIFIC AGES
WHO ARE POLYGYNOUS, BY POSSESSION OF RADIO OR SEWING MACHINE

Age group	Does not own radio or sewing machine	Owns radio or sewing machine	Per cent owning radio or sewing machine
20-24	0.5	(0.6)	21.5
25-29	3.5	3.1	23.8
30-34	4.2	3.9	23.9
35-39	6.4	6.9	22.6
40-44	8.2	7.9	21.2
45-49	9.0	12.6	20.5
50-54	10.7	12.0	23.8
55-59	12.1	10.1	19.7
60-64	14.1	(12.9)	19.6

An increase in education also increases exposure to Western ideas and values and, hence, would be expected to reduce the level of polygyny. Table 3 shows that proportionally polygyny is much less prevalent among the more than the less educated. Indeed, polygyny is almost absent among those with the highest level of education. It is likely that continued increase in education in Iran will lead to decreasing incidence of polygyny (6).

TABLE 3
PER CENT OF MARRIED MALE MOSLEM *IORC* SKILLED LABOR OF SPECIFIC AGES
WHO ARE POLYGYNOUS, BY EDUCATIONAL LEVEL

Age group	No education	1-5 grades	6 or more grades
20-24	—	(1.2)	0.4
25-29	5.5	4.7	1.2
30-34	6.5	3.8	2.2
35-39	7.9	5.9	3.2
40-44	10.4	5.5	(2.3)
45-49	10.6	7.8	—
50-54	11.4	9.9	—
55-59	12.4	(7.1)	—
60-64	14.0	—	—

D. SUMMARY

This paper has shown that there is a marked variation in the extent to which Iranians avail themselves of the religiously sanctioned option of having more than one wife. Generally, the higher the occupational status the greater the incidence of polygyny, and the higher the education the less the incidence.

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THE RELATIVE EFFECTIVENESS OF ROLE PLAYING AND TASK ORIENTED GROUP EXPERIENCE IN PRODUCING PERSONALITY AND BEHAVIOR CHANGE*

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A. INTRODUCTION

The study to be described was one of a series that was devoted to testing the relative efficiency of various group methods for producing behavioral and personality changes. The present study compares the relative effectiveness of rôle playing and task oriented study group activity in producing such changes.

Rôle playing has become increasingly popular in recent years and has been used in a variety of settings ranging from industry (1), schools (5), prisons (8), to hospitals (4), speech, vocational and child guidance clinics (6, 12). Although a great many articles have been written that favor the use of rôle playing as a technique for changing behavior, most of this literature is descriptive rather than experimental. A recent review of this literature (10) has pointed out that there are surprisingly few experimental evaluations of rôle playing.

Task oriented study groups have also been the object of much recent attention. Such groups have often been used for small group research. Studies involving Task oriented groups have recently been summarized by Kelly and Thibaut (7). In general these studies analyze the relationships between relevant process variables operating in task groups. With the exception of studies such as those by Lewin (9), Willerman (13), and Coch and French (3) in the group decision area, they do not explore the use of groups as a means of producing behavioral changes.

While rôle playing practitioners often claim that rôle playing increases spontaneity, improves interpersonal relations, and generally facilitates individual growth (11), such claims have not been made for task oriented study group activity. Task groups have generally been viewed as an efficient means of carrying out problem solving activities. It might therefore seem unfair to

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compare the relative effectiveness of the two methods using personality and behavioral change as the criteria. On the other hand it would be premature to assume that either of the group methods are effective until they have been tested since it is possible that (a) neither of them produce perceptible change, (b) both produce such change, or (c) that one produces more change than the other. Since both methods are widely used and extremely flexible a test of their relative effectiveness would seem to be of practical importance. In addition the comparison of these group methods should aid in clarifying the degree to which personality and behavior change is produced by group activity regardless of its nature, and the degree to which the specific nature of the group activity determines the effect of the group experience.

B. PROBLEM

In the present study change in behavior and personality was measured by a series of ratings made by group members. Recent factor analytic studies of small group interaction, as summarized by Carter (2), suggest that individual behavior in small groups can be described in terms of the following three factors: Individual Prominence and Achievement, Aiding Attainment by the Group, and Sociability. Since these factors seem to account for most of the variance of an individual's behavior in a small group, variables with high loading on each of these factors were used as the rating criteria for this study. The criteria of "prominence in the group" and "leadership initiative" were derived from the factor of Individual Prominence. "Aiding in the attainment of group goals" and "cooperativeness" were derived from the factor of Aiding Attainment by the Group. "Friendliness to others" and "desirability as a friend" were derived from the Sociability factor. A general rating on the criterion of "adjustment" was also included.

C. METHOD

1. Subjects

The experimental sample consisted of 72 subjects drawn at random from a graduate course in Education. This course consisted of lectures on modern developments in psychology and education and of small group experiences which are described below. Twenty-five of the subjects were male and 47 were female. The median age was 31; the age range extended from 19 to 53 years. Thirty-nine of the subjects were white and 33 were Negro.

2. Procedure

The subjects were assigned to eight-man groups by a system of random sampling which controlled for race and sex. Six of these groups engaged in rôle playing. Three groups engaged in task oriented study group activity. Each group met four times a week for one hour over a period of three weeks. Rôle players planned and supervised their rôle playing activities. Study group members were instructed to discuss an assigned list of readings that were relevant to the material discussed in the lectures which all group members attended. In order to avoid the problem of distinguishing between the effects of (a) the leader's personality, (b) the leader's competence, and (c) the group activity itself in the interpretation of results, the group activities were so planned as not to require assigned leadership.

On the third and tenth group meeting group members rated each other on the criteria previously described.

D. RESULTS AND DISCUSSION

The statistical comparison of the task oriented study groups with the rôle playing groups was designed to determine not only whether these groups differed significantly in amount of change, but also whether they differed significantly in their post-experimental scores. The latter analysis was necessary to ensure that significance of difference in amount of change was not an artifact caused by a regression effect. Such a regression effect could be responsible for a significantly greater change in the group with the lower initial rating; it could not, however, produce a significantly higher final rating for that group. In order to test whether one kind of group experience produced more change than another a change score was obtained for each subject on each of the seven criteria. The change score was calculated by subtracting the pre-experimental from the post-experimental rating received by the subject on the given criterion from the other group members. The change scores of subjects in the two group activities were compared by a *t*-test using the .05 level of significance. The results of this analysis indicated that the task oriented study group members changed significantly more than the rôle playing group members on the variables of "desirability as a friend," "leadership initiative," "cooperativeness," and "general adjustment." In accordance with the procedure previously outlined, the post-experimental scores of the subjects in the two kinds of group experience were also compared on all seven criteria. A comparison of these scores by a *t*-test indicated that study group members had significantly higher post scores than rôle playing group members

on the variables of "desirability as a friend," "leadership initiative," "cooperativeness," and "general adjustment." Thus change scores and post scores showed change on the same variables.

The findings of the present study are somewhat unexpected since it was reasonable to assume that rôle playing would produce greater personality and behavioral change than study group activity. However the results clearly indicate that task oriented study groups produce greater changes in group members ratings on four of the seven variables measured in this study. It should be noted, however, that group member ratings may reflect reaction to the group experience as a whole rather than an objective assessment of separate individuals. An Evaluation of Small Group Experience Questionnaire administered to all subjects at the end of the experiment indicated that members of the study group felt that "the group certainly helped me get more out of the class lecture" significantly more than members of the rôle playing group. Rôle playing members felt that they "didn't like the kind of group to which I was assigned at first" and "sometimes felt a little bit anxious before the group meeting began" significantly more than members of the study group. These responses suggest that the improvement found in the ratings of study group members may, in part, have reflected contentment with the group experience rather than group member personality and behavioral change.

E. SUMMARY

The study investigated the relative effectiveness of task oriented study group activity and rôle playing activity in producing personality and behavioral change. Seventy-two subjects were randomly selected from a graduate course in Education. The subjects were stratified for race and sex and randomly assigned to groups of eight which met over a period of three weeks, four times a week, for one hour. During the group meetings six of the groups engaged in self-directed rôle playing and three groups engaged in task oriented study activity. An analysis of group member ratings obtained at the third and tenth session indicated that study group members changed significantly more than rôle playing group members on the variables of "desirability as a friend," "leadership initiative," "cooperativeness," and "general adjustment." Alternate interpretations of these findings were discussed.

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SPANISH-AMERICAN BILINGUALISM AND THE AMMONS FULL-RANGE PICTURE-VOCABULARY TEST*

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A. INTRODUCTION

A serious problem in the measurement of intelligence is that of bilingualism and its effect on test scores. In numbers of studies (2, 11, 13, 14, 18) in which both verbal and non-verbal tests were administered to Spanish-speaking bilinguals, for example, it was found that they scored generally lower on verbal tests, as a result of which it was concluded that they suffered from language handicap in such tests. A majority of these studies simply have been comparisons with monoglot norms. Few investigations, however, have been designed to explore the exact relationship between bilingualism and verbal test performance. Moreover, the usual previous research with verbal instruments has required reading or oral response by the bilingual subject.

A major purpose of the present study, therefore, is to investigate the association between objectively measured bilingualism and performance on the Ammons Full-Range Picture Vocabulary Test (4), which requires the subject merely to point to a picture which best describes a spoken word. Although, with the *FRPV*, the subject must still understand the spoken word in a language in which he may be handicapped, he is undoubtedly at greater advantage with that test than he would be with other tests which require him to read or define orally words in that language. Another important purpose of the present study is to establish tentative norms for 17-, 18-, and 19-year-old Spanish Americans for the *FRPV*. An earlier study by Ammons and Aguero (3), using subjects from the Denver, Colorado, high-school system established norms for the *FRPV* for ages 7 through 16. However, these investigators were unable to go beyond age 16 because of a large school dropout rate which resulted in an unrepresentative sample above that age. Most studies using Spanish-American subjects have likewise been limited to lower age groups and school grades because of this problem.

B. SUBJECTS AND PROCEDURE

Subjects for this study were 150 volunteers for the military services being

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processed through the Armed Forces Examining Station in Albuquerque, New Mexico. They were all tested and interviewed prior to enlistment. After usual rapport-building, which included questions about their backgrounds, they were given the Hoffman Bilingual Schedule (16) and the Ammons *FRPV*, Form *A*, in that order. Only Spanish-American bilingual males were used, 50 each from 17-, 18-, and 19-year-old age groups.

Data about subjects are as follows: For the 17-year-olds, mean *CA* was 17 years and 4 months, mean school grade completed was 9.62 with a range from 8th through 12th grade, and 88 per cent had lived in the same community all their lives; mean *CA* of the 18-year-olds was 18 years and 5 months, mean school grade completed was 10.60, with a range from 7th through 12th grade, and 86 per cent had lived in the same community all their lives; mean *CA* for 19-year-olds was 19 years and 4 months, mean school grade completed was 10.78, with a range from 7th through 13th grade, and 82 per cent had not moved from their home communities in their lifetimes. Subjects in all three groups came from large families, all reporting an approximate mean of three brothers and three sisters. Thus, the groups represent a relatively high degree of homogeneity, except for the fact that the 17-year-olds have completed approximately one school grade less than the two older groups. This educational difference is statistically significant; the *t* between 17- and 18-year-olds is 3.90, while that between the 17- and 19-year-olds is 4.30. Both these *t*'s are significant at the .01 level. There is no statistically significant difference in education, however, between the 18- and 19-year-olds.

The difficulty in obtaining a representative sample of Spanish-Americans in this age bracket, if the sample is taken exclusively from a school population, may be seen by noting the school dropout rate for our subjects. Whereas all of them had completed the 7th grade, 97.2 per cent had completed the 8th; 87.9 per cent the 9th; 69.9 per cent the 10th; 46.6 per cent the 11th; and 29.3 per cent the 12th, representing high school graduation. Only 2.0 per cent had finished the first year of college. At the time of testing, however, the majority of them were still in school, for 62 per cent of 17-year-olds, 66 per cent of 18-year-olds, and 58 per cent of 19-year-olds (or 62 per cent of the whole group), were still classified as students at the time of volunteering for military service. Thus, our sample includes subjects both in school and out, a ratio of about three-fifths of the former to two-fifths of the latter.

Some comment should be made here about the instruments used in this research. The Hoffman Bilingual Schedule (16), which permits of an objective measure of bilingualism, consists of 14 written questions divided

into 37 parts. It investigates the speaking, reading, and listening experiences of the subject. A typical item is the query, "Are radio programs which are given in a language other than English listened to in your home?" In answer to each question, the subject designates whether the response is "never," "sometimes," "often," "mostly," or "always," these qualitative terms being defined for the subject. Values of 0 through 4 are arbitrarily assigned for each of these categories. Hoffman reports validity coefficients of .73 and .83 for the Schedule, and reliability r 's of .81 (retest) and .92 (split-half). Briefly, the rationale of the instrument lies in assessing the amount of foreign language background in relation to English; its object is not to measure the extent to which the subject knows or uses more than one language, but to achieve a measure of the bilingual milieu to which he is exposed. Questions therefore seek to ascertain the language spoken by either parent or by others in the subject's environment, the presence or absence in the home of reading matter in the foreign language, etc. The majority of Hoffman's subjects in his standardization sample were Jewish and Italian residents of New York City.

The Ammons *FRPV* (7) consists of 16 plates, each having four cartoon-like pictures representing a variety of life-situations or everyday scenes. Accompanying the plates is the answer sheet, a form listing several words for each plate arranged by order of difficulty and plate number, in all 85 words. Point levels are printed on the answer sheet after each word and represent the *MA* at which 50 per cent of a representative population would fail the word. Subjects are shown plates in the order from 1 to 16, the words for each plate being read to them from the answer sheet. The subjects are instructed merely to point at the one picture out of the four on the plate which the word describes. One point is given for each correct response for a maximum possible score of 85. Ammons and others report validity coefficients ranging from .46 to .87, depending on subjects and criterion tests employed, and reliability coefficients ranging from .86 to .99 (1, 3, 5, 6, 7, 8, 9, 24, 25). It is of some moment to the present study that validity coefficients of .85 and .82 with Binet vocabulary, and a reliability r of .86 (Form *A* vs. Form *B*) are reported for 80 Spanish-American children (3).

C. RESULTS

1. Results for the Hoffman Bilingual Schedule

Hoffman results for the three age groups reveal that 17-year-olds range from a score of 6.5 to 26.7, with a mean of 17.9 and *SD* of 3.7; 18-year-olds

range from 7.6 to 26.7, with a mean of 18.2 and *SD* of 3.4; and 19-year-olds range from 6.2 to 28.5, with a mean of 17.3 and *SD* of 3.7. The means indicate no statistically significant change in bilingual scores with increase in age. Hoffman (16) reports similar findings. To give some meaning to the bilingual scores we obtained, percentile scores were computed and are presented in Table 1, which also presents for comparison Hoffman's results with his bilinguals.

TABLE 1
PERCENTILE RANKS OF SPANISH-AMERICANS ON THE HOFFMAN BILINGUAL SCHEDULE

Percentiles	Spanish scores	Hoffman's scores*
95	25.20	28.18
90	24.32	25.89
80	22.61	21.88
75	21.77	20.78
70	21.04	19.41
60	19.68	16.88
50	18.31	14.75
40	16.75	12.49
30	14.94	10.18
25	14.11	9.00
20	13.10	7.76
10	10.22	4.73
5	8.20	2.75

* Data from (16).

It is obvious from Table 1 that our subjects are relatively more bilingual than Hoffman's, since median score of our subjects is 18.31, while for Hoffman's group it is 14.75; the Q_1 for our group is 14.11, for Hoffman's it is 9.00; Q_3 for our group is 21.77, while for Hoffman's it is 20.78. The Spanish-Americans have higher scores for each percentile rank from 5 to 80, but the situation is reversed at the 90th and 95th percentiles. Discussion of these results, as of others, is presented later.

Correlations between bilingual scores and school grade completed are of interest here. For 17-year-olds, the r is $-.29$; for 18-year-olds, it is $-.16$; and for 19-year-olds, it is $-.36$. For the whole group, the r is $-.26$. These correlations are significant at the .05 level for 17-year-olds, and at the .01 level for 19-year-olds and the whole group. There would, then, generally appear to be a low significantly negative association between amount of schooling and bilingual background.

2. The Bilingual Schedule and the FRPV

Correlations were run between scores on the Hoffman test and the FRPV, and for 17-year-olds, the r was $-.60$; for 18-year-olds, it was $-.43$; and

for 19-year-olds, it was $-.48$. The correlation for the entire group of 150 subjects was $-.49$. All these correlations are significant at the .01 level. It may be seen that, for our sample, bilingual background bears a significant negative association with *FRPV*, although one must be cautious about maintaining that bilingualism is the sole influential factor in lowering *FRPV* scores. However, it is important to note that there is evident a more profound negative relationship between bilingualism and *FRPV* scores than between the former and school grade completed. On the other hand, the relationship between *FRPV* and schooling is quite solid. Correlations between *FRPV* and school grade completed are, for 17-year-olds, $.47$; for 18-year-olds, $.69$; and for 19-year-olds, $.56$. For the total group, the r is $.62$. All these r 's are significant at the .01 level.

A question of some immediacy now is to ascertain the relationship between bilingualism and the *FRPV* if we partial out the effects of schooling. For the group as a whole, the partial r is $-.44$, not too different from the original r of $-.49$. Other partial r 's are $-.54$ for 17-year-olds; $-.45$ for 18-year-olds; and $-.36$ for 19-year-olds. All these correlations are significant at the .01 level. It would appear from the partial correlations that the negative relationship between *FRPV* and bilingualism decreases steadily for the three age groups from ages 17 to 19. However, there are no statistically significant differences among these partial r 's.

3. Rural-Urban Differences

The fact that the Spanish-American population of New Mexico is scattered widely over the State raises the interesting question of rural-urban differences in both instruments used here. Subjects were divided into two groups on the basis of the populations of their home communities, with a population of 2500 used as the dividing line between rural and urban. Although this figure is the official one drawn by the Census Bureau, it is, as Sims (23) notes, purely quantitative and does not take into account psychological or occupational factors. The percentage breakdown in our whole group is about evenly divided, being 46 per cent rural and 54 per cent urban. This ratio is about the same for the three groups taken separately; it is 44-56 for 17-year-olds, 42-58 for 18-year-olds, and 52-48 for 19-year-olds.

The number of subjects in rural and urban categories who scored above and below the median bilingual score of 16.75 was found and a chi-square and test run between these variables. Obtained values of X^2 was 12.87, significant at the .01 level. There is therefore a strong difference between bilingual experiences, as measured by the Hoffman scale, of urban and rural subjects,

the latter scoring higher in bilingualism. In the case of the *FRPV*, the median score of 53 attained in this test by our group was used as the breaking point in a 2×2 chi-square table. The rural-urban difference again proved to be significant at the .01 level, X^2 being established as 7.35. This finding is consistent with that of Ammons and Manahan (9), who found that Anglo rural subjects scored lower than urbanites, although no significance test was recorded.

4. *FRPV Spanish-American Normative Test Results*

As noted previously, a second major purpose of our study was to establish tentative Spanish-American *FRPV* norms for our age groups. In this regard, our study is a logical extension of the earlier one by Ammons and Aguero who state, concerning their work, that "no attempt was made to set up norms beyond the tenth grade and age 16 due to the obvious unrepresentativeness of the sample of children remaining in school" (3, p. 5). Our group of subjects, on the other hand, is probably quite representative of their age groups, since it includes both those in school and those who dropped out. As noted before, 62 per cent of the total group were students still in school.

On the *FRPV*, Form A, the 17-year-old mean is 50.6, *SD* is 4.4; the 18-year-olds achieve a mean of 53.9, *SD* of 5.4; and the 19-year-olds obtain a mean of 54.8, *SD* of 5.2. The mean for the entire group is 53.1, and the *SD* is 7.4. The male Anglo mean is 69.6 for ages 18 to 34 (8), the difference between the Anglo and Spanish groups being obviously highly significant.

TABLE 2
COMPARATIVE SCORES FOR THE FULL-RANGE PICTURE VOCABULARY TEST, FORM A,
FOR ANGLOS AND SPANISH-AMERICANS

Anglo*		Spanish-American**	
CA	Mean	CA	Mean
6.5	24.7		
7.3	28.5		
8.4	33.2	7.0	25.1
9.5	36.2	8.2	24.5
10.5	42.8	9.0	29.0
11.4	52.8	10.0	33.5
12.4	53.5	11.0	34.8
13.5	55.7	12.2	39.2
14.5	58.4	13.2	44.9
15.5	63.7	14.2	44.2
16.4	63.7	15.0	47.9
17-34	68.8	16.4	49.0
		17.3	50.6
		18.4	53.9
		19.3	54.8

* Raw data from (5, 8).

** Raw data from (3) and present study.

cant. In our group, there are statistically significant differences between 17- and 18-year-olds, and between 17- and 19-year-olds (t 's of 3.32 and 4.32 respectively), but there is none between the two older age groups. This may be accounted for by the superior educational advantage of the two older groups, as will be noted later.

Table 2 and Figure 1 present the combined results of the raw data from the present study and those of Ammons and his co-workers (3, 5, 8). Table

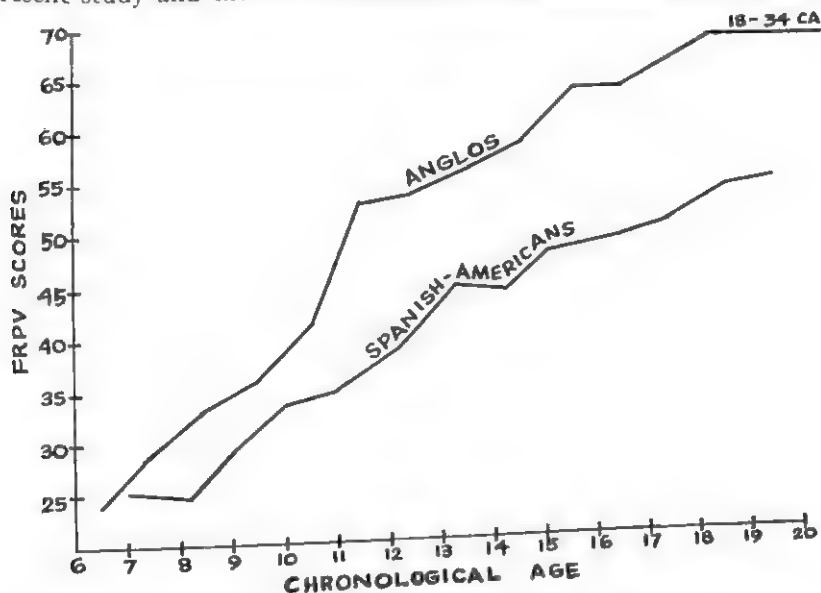


FIGURE 1
COMPARISON OF ANGLO AND SPANISH-AMERICAN SCORES ON THE *FRPV*

3 gives comparative percentiles for Anglo and Spanish groups. (Raw data are used since Ammons has smoothed his data from both Forms *A* and *B*.) It will be noted from Table 2 and Figure 1 that there is a steadily rising *FRPV* score from ages 7 through 19 for Spanish subjects. Compared with the approximate Anglo norms, however, Spanish-Americans are at a distinct disadvantage on the test. For example, the 17-year-olds score at about the Anglo 11-year-old level; the 18-year-olds score at about the Anglo 12.5-year-level; and the 19-year-olds score at about the Anglo 13-year-level. These comparisons are made with the raw data of Ammons, Arnold, and Herrmann (5). The differences take on added significance when it is recalled that *FRPV* requires neither reading nor verbal expression. Moreover, as Ammons and Aguero (3) have noted, there is a steadily widening gap between the two groups—the gap runs from about 3 points at the 7-

TABLE 3
COMPARATIVE PERCENTILE RANKS FOR THE FRPV, FORM A FOR ANGLOS
AND SPANISH-AMERICANS

Percentiles	Anglo scores*	Spanish scores
99	85	73
95	83	65
90	82	62
80	80	60
70	76	57
60	74	55
50	71	53
40	68	51
30	65	49
20	60	47
10	56	43
5	54	40
1	51	37

* Data from (8).

year-level to 14 points at the adult level. Figure 1 also appears to indicate a tapering off of the Spanish-American curve at about the 13-year-level while the Anglo curve would appear to taper off some two years earlier.

D. DISCUSSION

Bilingual scores in the present study, when contrasted with those found by Hoffman, indicating that our subjects are relatively more bilingual than his Jewish or Italian subjects, bear out Arsenian's contention that "bilingualism is not a uniform phenomenon" (10, p. 70). Hoffman himself states: "The same score might not have exactly the same meaning or import for different localities, nationalities, or other selected groups" (16, p. 54). Also, a possible explanation for our group's higher bilingual scores lies in the association of bilingualism with the urban-rural variable. Hoffman's subjects were all from New York City, where it is highly likely that cultural pressures are very strong towards use of and familiarity with English; our subjects, on the other hand, include a high proportion of ruralites with certainly more other-language isolation in a comparatively sparsely settled area like New Mexico.

The low but significant correlation between school grade completed and bilingualism also reveals that our group's school accomplishment may be affected by the bilingual factor. Garretson (13), Garth and Johnson (14), Kelley (17), Tireman (26), and more recently, Ammons and Aguero (3) and Yarbrough (27) report school retardation greater among Spanish-Americans. On the other hand, Arsenian (10) reports a well-controlled

experiment by Bovet among Afrikaans-speaking children of South Africa which indicates that bilingualism per se need not be a cause of school retardation. Thus, it should be stressed that bilingualism alone is insufficient to account for either greater retardation or a higher school dropout rate among any given nationality grouping.

The fact that the Bilingual Schedule correlates negatively and significantly with the *FRPV* is not surprising. Although the *FRPV* minimizes use of language by the subject, he must still understand the spoken word in English. Darcy, for example, reviewing some 110 separate investigations in bilingualism from 1911 to 1949, states that, "While few studies in the field have found that bilingualism did not serve as any handicap when verbal tests were used to measure intelligence, the general findings have been that bilingualists were penalized when their intelligence is measured on verbal tests, but there is no indication of the inferiority of bilingual subjects when their performance on non-language tests of intelligence is measured against that of monolingual subjects" (12, p. 52). Among the few studies in which bilingualism was of no handicap is that of Pintner and Arsenian (21); their study is of comparative interest here, for with Jewish children they report a correlation of practically zero between the Hoffman Schedule and the Pintner Intelligence Test, as contrasted with our r of $-.49$ between Hoffman and *FRPV*. However, before one can draw any conclusions about comparative difficulty of verbal-vocabulary type tests for Spanish-American children, it would be well to consult the work of Sanchez (22) who demonstrated that the 1916 Stanford-Binet, when evaluated for vocabulary difficulty, was found to contain many words which did not even appear in the best recommended word lists for bilingual children.

The differences between urban and rural subjects in both the Bilingual Schedule and the *FRPV* are to be expected. Cultural anti-bilingual pressures mentioned above with regard to Hoffman's New York subjects would apparently apply, although perhaps to a lesser degree, to our Spanish-American urban subjects. Concerning the *FRPV*, our results are simply consistent with the bulk of previous studies showing the superiority of urban residents in intelligence tests. Pintner (20) long ago demonstrated this in his work on intelligence testing, which includes reviews of many studies of urban-rural differences. More recently, McNemar (19), discussing data with the Revised Stanford-Binet, reports differences between urban and rural groups of between 6 points at the pre-school level to about 12 points at the adolescent level, the urban groups scoring higher. It is well-known that the Stanford-Binet becomes increasingly verbal at higher age levels, and this

increase in the verbal component may partially account for the increased rural-urban differences with age. Similarly, the *FRPV*, being basically a verbal instrument, reveals this difference both in our study and that of Ammons and Manahan (9).

Our data on normative results for our group, plus the work of Ammons and Aguero (3) on younger age groups, show that the two populations (Spanish-American and Anglo) move from similarity in test scores at earlier ages to dissimilarity at the older ages. Although this finding is contrary to that of Garretson, who concludes that "the factor of language difficulty operates to the disadvantage of the Spanish group in Grades I and II, but is in this group apparently of less importance in Grades III to VIII" (13, p. 40), we are in agreement with both Haught (15) and Garth and Johnson (14). These investigators, using verbal tests with Spanish-American subjects, found the same tapering off phenomenon beginning at about age 12 that is shown in our Figure 1. The relative differential decline in verbal ability revealed by the combined Ammons-Aguero and present study data is also similar to findings reported by Tireman (26) in his investigation of Spanish-American comprehension and reading rate. Tireman demonstrated that, as these subjects progress through school from Grades 3 to 8, their ability to read drops more and more below established norms in both rate and understanding. He feels that the relative decline in reading ability of Spanish-American children is due to differences in reading experiences between them and Anglo groups. As he says: "English-speaking children make use of their favorable environment and continue to read. The Spanish-speaking children are unable to find material in English and gradually cease to read" (26, p. 623). Whether this explanation is adequate to account, partially or completely, for the comparative decline in Spanish-American verbal ability on the *FRPV* is difficult to say.

Another factor to be considered in regard to the differential decline in Spanish-American verbal ability on the *FRPV* is that of education. Altus states that "even if continuance in school might reduce discrepancy between performance skills and English-speaking skills, termination of the formal educative process might in some instances halt or even reverse this process" (2, p. 246). As noted before, the correlations between *FRPV* and amount of schooling are all fairly high and significant. Also, it should be noted that significant differences were found between 17-year-olds and the older age groups, to the advantage of the latter, both in *FRPV* and in amount of schooling.

E. SUMMARY

An objective measure of bilingualism, the Hoffman Bilingual Schedule, and the Ammons *FRPV* were administered to 150 Spanish-American subjects, 50 each from *CA*'s 17, 18, and 19. Major findings of the present study are: (a) Bilingualism remains constant in the three age groups, although it is greater for them than for a New York City sample; (b) there is a low significantly negative association (r of $-.26$) between amount of schooling and bilingual background; (c) there is a stronger negative association (r of $-.49$) between bilingualism and *FRPV*, this r dropping to $-.44$ when schooling is partialled out; (d) a stronger positive r of $.62$ exists between schooling and *FRPV*; (e) urban-rural differences are significant in both measures used, urbanites scoring higher on *FRPV* and lower in bilingualism; (f) Spanish-Americans score considerably lower than Anglos on the *FRPV*, and, combining present data with those of Ammons and Aguero, there is increasing difference in score between the two groups from ages 7 to 19.

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ATTITUDE TOWARD STATUS AND ITS EFFECT UPON STATUS JUDGMENTS*

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A. INTRODUCTION

The judgment of status seems to be a function of at least two variables in addition to the status of the individual being judged. The variables are (a) the reference group, which serves as the standard according to which the judgments are made, and (b) the attitude of the individual toward status. Various investigators (4, 7) have demonstrated that status judgments vary with the reference group. However, in these and other studies of status, it has been at least implicitly assumed that the attitude toward status either has no bearing upon status judgments or that its effect varies randomly.

Since the assumption of the independence of judgments and the attitudes of the judges is a prerequisite for any attitudinal scale construction, various studies have dealt with this problem (3, 5, 6, 8). Thurstone felt that it was necessary to assume that the judgments and the attitude of the judges were independent, or the scaling process would be invalid (11, p. 92). Hinckley (5), using Thurstone's procedure, had three groups of judges—northern whites, southern whites, and Negroes—sort statements of attitudes toward the Negro. After the sorting, the attitudes of the judges toward the Negro were obtained. The correlations between the pro-Negro and anti-Negro groups of white judges was .98, and between the Negroes and anti-Negro groups of whites was .94. Using average scores, there was a slight tendency for the anti-Negro whites to judge more items to be extreme pro-Negro.

Webb (12, p. 233), in a review of methodological studies of attitudes scaling, differentiates between the effect of "personal involvement" and the utilization of "different standards" by the judges. While Hovland and Sherif, after having repeated Hinckley's study (6, p. 826), maintain that Negro judges are personally involved when judging items pertaining to atti-

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tudes toward the Negro, Webb argues that the Hinckley items were written from the white man's point of view and that Negro judges do not use the same standards in their judgments. Since Hinckley did not control for the choice of standards by the judges, the problem remains unsolved.

The purpose of this study is to determine the effect of attitude toward status upon status judgments under varying conditions of personal involvement (high, medium, and low) and with the utilization of different reference groups. It is hypothesized that: (a) the effect of attitude toward status upon status judgment is a direct function of the degree of personal involvement, and that (b) varying the personal involvement will have an independent effect from that of shifting the reference group.

B. METHOD

1. *Subjects*

The subjects consisted of 400 individuals representing five different professions, psychiatry, psychology, social work, nursing, and teaching. State employed were selected from six different state hospitals and schools; non-state professionals came from 27 different clinics, agencies, general hospitals, public schools, and from private practice. There were 40 professionals from each of 10 subgroups according to profession and type of employment. For the judgment of the status of other professions the sample also included a group of 28 psychiatric residents and a group of 40 physicians (non-psychiatrists) from various medical specialties.

2. *Materials*

Two identical vertical scales, ranging from 0 to 100, were attached to a 19" x 24" metal board; one in the center of the board, the other on the left side. A piece of dark cloth was attached to the board so that it could be folded over the board and cover the center scale, leaving the left scale uncovered. The zero points on both scales were labeled "no professional status at all"; the 100 points were labeled "profession with highest status." A set of 22 small magnets, $7/16"$ x $7/8"$ x $1/4"$, were each fastened to a plastic label, carrying the name of a different professional specialty. The specialties on the labels consisted of the 10 professional subgroups comprising the sample and 12 additional specialties such as U.S. Supreme Court Justice, neurologist, professor in medical school, hospital attendant, etc. The plastic labels were pointed on both ends so that they could be placed on either side of the scale pointing toward it.

A third scale, ranging from 0 to 100, was attached to another board 11" x 14". The zero point on this scale was labeled "completely unimportant"; the 100 point was labeled "most important." A set of eight magnets of the same size was each fastened to a label, carrying a factor of job satisfaction. The factors were: *intellectual stimulation, pay, status and prestige, regular work hours, security, patient's respect, freedom, and type of patient.*

3. Procedure

Each S was seen in a standardized individual interview by one of three interviewers, and instructed as follows:

I am (name of interviewer) from the Social Research Project of the Ohio State University. We are making a survey of opinions of various people about the status and prestige of certain professions. By status and prestige we mean the amount of importance, respect, dignity, and the degree of influence that each profession has.

We guarantee the strictest confidence about any information that you will give us. No information about you will be revealed. We are only concerned with answers from groups of people, not with a single individual's answers. We are not testing your intelligence; what we want is your opinion about these matters.

I have here a magnetic board and a set of professions. Hold it on your lap and lean it against the table. In the center of the board is a set of numbers that ranges from 0 to 100. These numbers stand for the amount of status and prestige. Zero means no status whatsoever; 100 means the greatest amount of status and prestige. I'd like you to place the professions beside the numbers according to the amount of status that each profession has. Begin by asking which profession you think most people would select as having the greatest amount of status and prestige. Take that profession out and put it beside the number that you think the "general public" would give it. Remember, 100 means the greatest amount of status and prestige that any profession has.

Now I want you to take the profession that the "general public" would choose as having the lowest status and prestige. Place it beside the number that the "general public" would give it. Remember, zero means no status at all.

Now, go on and place the rest of the professions where the "general public" would place them. Please remember, place the professions as the "general public" would do, rather than your own personal way of placing them. If you think that two or more professions are equal in status, place them beside each other. You may place them on both sides of the scale. Try to make the points touch the line.

This procedure resulted in status judgments of own specialty (high

personal involvement), of professional counterparts² (medium personal involvement), and of 20 other professional specialties (low personal involvement). The standard of judgment, the reference group, was the "general public" for all the above judgments.

The interviewer then transferred the label carrying *S*'s own professional specialty to the second scale at the point at which *S* had placed it according to the "general public," and covered the center scale, including all the remaining labels, with the cloth. He then proceeded with the following instructions:

This is the same scale as the one I just covered. Zero means no status at all; 100 means the greatest amount of status that any profession has. Previously, you placed the professions where you thought the "general public" would place them. Here is where you placed your own specialty (pointing to specialty on second scale). Now I'd like you to place it where you think *other professions* would place your particular specialty.

The interviewer here names *S*'s profession (e.g., physicians, if *S* was a psychiatrist), and *S*'s professional counterpart, each separately, each time returning the label of *S*'s specialty to the point where he had placed it according to the "general public." In order to make the judgments independent, the last two judgments were later corrected by subtracting from each the judgment of "general public." This procedure resulted in status judgments under conditions of high personal involvement, with a shift in the reference groups from "general public" to "profession" to "professional counterpart." The interviewer then proceeded as follows:

Now I want you to take the second board that I have here. On this board you will find eight factors that may be important in a person's work. I want you to place these factors beside the numbers according to their importance to you. One hundred means the greatest amount of importance, zero means completely unimportant.³

The last procedure resulted in statements of the importance of status and prestige. Using the mean score of importance of "status and prestige" of the entire sample, the sample was split into two groups; those falling above the mean became the high importance of status group (*HIS*), and those falling below the mean became the low importance of status group (*LIS*). Even though the distribution of the importance of status was skewed in the direction of high importance, the mean, 68, rather than the median, 74, was

² By professional counterpart is meant here the same professional specialty as *S* but in a different occupational setting, that is, state employed if *S* is not state employed and vice versa.

³ The interview included additional information not referred to in this study since it does not pertain to the hypotheses.

selected as cut-off score since it was closer to the midpoint of the entire range and would thus make for more similar variability of the *HIS* and *LIS* groups.⁴

C. RESULTS

1. Reliability

The reliability of the judgments was determined by a test-retest correlation of the judgments of 16 *S*'s over an interval of 10-12 weeks. The *S*'s were randomly selected and consisted of 11 persons from various professions and five lay people. The test-retest correlation coefficient of the mean judgments was .998.

In order to determine the comparability of the above technique to other scaling techniques, additional data were gathered on status judgments of 20 occupations, using six different techniques (1). The techniques were (a) paired comparison, (b) Likert, (c) Thurstone's equal appearing intervals, (d) a graphic rating technique, (e) a ranking technique, (f) the present technique, referred to as the magnetic board rating technique. These data were collected on 80 judges consisting of college students. The intercorrelations of the scale values between any two techniques ranged from .982 to .997. The reliabilities for the mean scale values of the six techniques ranged from .988 (Likert) to .995 (paired comparison), and the mean reliabilities for one judge varied from .806 (Likert) to .915 (paired comparison). On the basis of these findings it was concluded that the present technique did not differ from the other five techniques with respect to its precision of scale values and its reliability.

2. Relation Between Attitude Toward Status and Status Judgments

The statistics in testing the hypotheses consist of Pearson product-moment correlations, correlation coefficients of agreement (10), and sign test of the direction of means. The correlation coefficients of agreement are presented since it was felt that for any measurement of bias, linearity of a relationship, as indicated by Pearson product-moment correlations, is not sufficient. That is, any bias may affect the absolute value of judgments without changing their linear relationship. Coefficients of agreement, by taking into account mean differences and variances in addition to Pearson correlations, indicate the degree of absolute agreement of two variables, when they are linearly related.

Table 1 presents the Pearson correlation coefficients (r) and coefficients of agreement (r_1) of status ratings under conditions of high personal involve-

⁴ Judges falling on the mean were excluded altogether.

TABLE 1
CORRELATION COEFFICIENTS, MEANS, AND DIFFERENCES OF MEAN STATUS JUDGMENTS OF
OWN SPECIALTY, PROFESSIONAL COUNTERPART, AND OTHER PROFESSIONS,
BETWEEN *HIS** AND *LIS***

Status judgments of:	N	r	r_1	\bar{X}_1	s_1	\bar{X}_2	s_2	t
Own specialty	10	.662	.459	61.76	8.394	55.61	8.121	1.665
Professional counterpart	10	.852	.739	59.70	9.634	54.60	10.846	1.112
Other professions†	22	.993	.957	65.70	16.257	61.77	18.980	.737

* Judges attaching high importance to status ($N = 243$).

** Judges attaching low importance to status ($N = 156$).

† Number of judges in *HIS* = 288 and in *LIS* = 177.

ment (own specialty), medium personal involvement (professional counterpart), and low personal involvement (other professional specialties), between the judges in *HIS* and *LIS*. The reference group for all of these judgments was the "general public." The correlations obtained are in accordance with the first hypothesis. The highest correlations between *HIS* and *LIS* are obtained when little or no personal involvement occurs ($r = .99$, $r_1 = .96$); the lowest correlations are found when high personal involvement occurs ($r = .66$, $r_1 = .46$) and the correlations in medium personal involvement fall in between the other two ($r = .85$, $r_1 = .74$). Since the correlations in the last row of Table 1 are not strictly comparable to those in the preceding rows (different N), the means and differences between the various judgments by *HIS* and *LIS* are also tabulated. Although the differences do not reach statistical significance, they are in accordance with the first hypothesis. Here it should be kept in mind that each mean score is based on over 150 judges, yet the N is only 22 or less, hence the differences do not reach statistical significance.

Table 2 presents the Pearson correlation coefficients and coefficients of agreement of status judgments of own specialty (high personal involvement)

TABLE 2
PEARSON CORRELATION COEFFICIENTS AND COEFFICIENTS OF AGREEMENT OF MEAN JUDGMENTS OF STATUS OF OWN SPECIALTY EXPECTED FROM THE VARIOUS REFERENCE GROUPS BETWEEN *HIS** AND *LIS***
($N = 10$)

Reference Group	r	r_1
General public	.662	.459
Professional counterpart	.625	.614
Own profession	.832	.829

* Judges attaching high importance to status ($N = 243$).

** Judges attaching low importance to status ($N = 156$).

between *HIS* and *LIS*, using three different reference groups. The Pearson correlations range from .63 to .83. These results support the second hypothesis that the effect of shifting the reference group is separate from that of varying the personal involvement. Comparing the range of correlations in Table 2 to those in Table 1, we find that a shift in the reference groups, under the condition of high personal involvement, demonstrates the effect of attitude toward status upon status judgments somewhat less than does the shift in the degree of personal involvement.

Since most studies of status make no provisions for the attitude toward status when judgments of status of other occupations are required, the data were further analyzed to determine the attitudinal effect under conditions of low personal involvement, while keeping the reference group constant. Table 3 indicates the Pearson correlation coefficients and coefficients of agreement of judgments of 21 occupations between *HIS* and *LIS*, according to the professional specialties of the judges. The Pearson correlations range from .92 to

TABLE 3
PEARSON CORRELATION COEFFICIENTS AND COEFFICIENTS OF AGREEMENT OF MEAN STATUS RATINGS BETWEEN *HIS** AND *LIS***, ACCORDING TO PROFESSIONAL SUBGROUPS AND TOTAL SAMPLE

Professional subgroups	<i>N</i>	<i>r</i>	<i>r</i> ₁	Number of judges	
				<i>HIS</i>	<i>LIS</i>
Psychiatrists, Institution	21	.951	.844	25	15
Psychologists, Institution	21	.955	.978	26	14
Social Workers, Institution	21	.982	.944	24	16
Teachers, Institution	21	.988	.950	24	16
Nurses, Institution	21	.946	.905	27	13
Psychiatrists, Private Practice	21	.989	.988	23	17
Psychologists, Ment. Hyg. Clinic	21	.993	.982	19	20
Social Workers, Private Agency	21	.982	.980	24	16
Teachers, Public School	21	.975	.923	28	12
Nurses, General Hospital	21	.915	.835	23	17
Physicians, (Non-psychiatrist)	22	.944	.892	28	12
Psychiatric Residents	22	.969	.747	17	9
Total	22	.993	.957	288	177

* Group attaching high importance to status.

** Group attaching low importance to status.

.99, the coefficients of agreement range from .75 to .99, thus indicating that the attitude toward status has little effect upon status judgments, as long as little personal involvement occurs and the reference group is kept constant. Table 4, however, presenting the mean ratings and standard deviations of *HIS* and *LIS* of the 21 professions, shows different results. With one ex-

TABLE 4
MEANS AND STANDARD DEVIATIONS OF STATUS RATINGS OF *HIS** AND *LIS***
ACCORDING TO PROFESSIONAL SUBGROUPS AND TOTAL SAMPLE

Professional subgroups	<i>H I S</i>			<i>L I S</i>		
	Number of judges	\bar{X}_1	s_1	Number of judges	\bar{X}_2	s_2
Psychiatrists, Institution	25	68.7	11.99	15	64.5	17.86
Psychologists, Institution	26	66.2	20.18	14	62.5	20.77
Social Workers, Institution	24	72.6	16.50	16	68.3	19.12
Teachers, Institution	24	67.6	16.69	16	63.6	19.91
Nurses, Institution	27	66.8	16.49	13	61.8	17.40
Psychiatrists, Private Practice	23	60.4	18.64	17	59.8	19.17
Psychologists, Mental Hygiene Clinic	19	63.1	19.76	20	60.6	21.57
Social Workers, Private Agency	24	63.4	19.49	16	64.3	18.83
Teachers, Public School	28	64.6	17.19	12	60.4	22.16
Nurses, General Hospital	23	65.4	14.79	17	56.0	19.62
Physicians, (Non-psychiatrist)	28	63.9	14.87	12	59.5	18.03
Psychiatric Residents	17	70.8	14.93	9	59.4	19.06
Total	288	65.7	16.26	177	61.8	18.98

* Judges attaching high importance to status.

** Judges attaching low importance to status.

ception, all the means of *HIS* fall above those of *LIS*. The sign test reveals high significance ($P = .006$). Similar results are indicated when the standard deviations of *HIS* and *LIS* are compared, *LIS* having consistently higher standard deviations.

It seems, therefore, that the attitude toward status may have a moderate effect upon status judgments, even if the degree of personal involvement and the standard of judgment is controlled, and that this effect is not brought to light when correlational procedures are employed. A word of caution, however, seems to be necessary in the interpretation of the above results. It is

the opinion of the authors that the consistently higher means of *HIS*, when compared with *LIS*, may indicate the effect of some other factors such as rating habit, rather than the effect of attitudes toward status. That is, it is entirely possible that some interviewees generally use high values while others generally use low values. Such an interpretation would also explain the consistent differences in the standard deviations. Since the mean importance of status score was 68, the *HIS* group had a possible range of only 31, while the *LIS* group had a range of 67, over twice that of *HIS*. These unequal ranges resulted in unequal variabilities in the judgments of the importance of status and prestige. The parallel between the attachment of importance to status and the ratings of the status of the professions by the two groups of subjects suggests that some constant error similar to rating habit is operant.

D. DISCUSSION

The results of this study indicate that personal involvement and the use of reference groups in judgments of status are important variables to be considered when status is studied. Furthermore, the results tend to support the hypothesis that personal involvement and the reference groups which serve as standards of judgments ought to be considered separately since they have different effects. Shifting the reference groups was found to have less of an effect than varying personal involvement. We cannot assume, at this point, that a shift in the reference group under conditions of medium and low personal involvement will have a similar effect. Furthermore, additional investigation would be required before any generalization could be drawn as to the relative effects of shifting the reference groups and varying personal involvement. It is the opinion of the authors that if the degree of personal involvement were to be decreased or the reference groups made more dissimilar, the effect of shifting the reference group would exceed the effect of varying the personal involvement.

It should also be kept in mind that this report attempts to relate judgments of and attitudes towards status, using a new technique. It seems doubtful, however, that the obtained results are a function of different reliabilities of the various judgments, since all correlations in this study are based on mean judgments. In any case, the generality of the results can only be determined on the basis of additional studies. Nevertheless, the authors are in agreement with Webb that "the responsibility of specifying the standards on the basis of which items are to be judged is to be placed on the scale constructor" (12, p. 233).

Finally, the results of this study also seem to indicate that status judgments about one's own occupation should not be combined with judgments by others about the same occupation in order to obtain an averaged status score for that occupation (see, for example 2, p. 393).

E. SUMMARY

This study attempts to investigate the effect of different attitudes toward status upon status judgments, under conditions of high, medium, and low personal involvement, and following shifts in the reference groups. It was hypothesized that (a) the degree of personal involvement is directly related to the effect of attitudes toward status upon status judgments, and that (b) varying the personal involvement will have an independent effect from that of shifting the reference group.

The data in this study were collected in an investigation of status and job satisfaction of 468 professionals, from various hospitals, schools, agencies, and from private practice, in the state of Ohio. In individual interviews, the subjects were instructed to rate the status of their own specialty, that of their professional counterpart (same professional specialty as interviewee, but different occupational setting), and that of 20 other specialties, according to the "general public." The interviewees then rated the status of their own specialty as they thought their professional counterparts and their total profession would rate it. Finally, the interviewees rated the importance of status and prestige among seven other factors of job satisfaction.

The results support both hypotheses. The status judgments of the judges who attach high importance to status correlate .99 with the status judgments of the judges who attach low importance to status when judging other professions, .85 when judging status of the professional counterparts, and .66 when judging their own status. When the reference groups were changed, the correlations varied from .83 with one's own profession as reference group to .63 with one's professional counterpart as reference group. It is concluded that the attitude toward status has an important effect upon status judgments under conditions of high personal involvement, and that its effect can only be determined when the reference groups are controlled. Furthermore, the attitude toward status seems to have little effect upon status judgments, under conditions of low personal involvement when the reference group is kept constant.

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A COMPARISON OF SIX DIFFERENT SCALING TECHNIQUES*

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A. PROBLEM

The purpose of this study was to compare a new scaling method, the magnetic board technique (+) with five of the popular scaling techniques. The magnetic board consists of a thin steel board, on which a scale ranging from 0 to 100 was drawn, and a set of printed stimuli, each fastened to a small magnet. The stimuli are pointed on both ends so that they can be placed on either side of the scale.

The general plan of study was to intercorrelate the scale values obtained from the six different techniques. It was expected that a factor analysis of this matrix would yield a factor which could be interpreted as a general scale value. Thus, all the techniques could be compared with this factor of general scale value. The major hypothesis of this study was that the magnetic board technique gives scale values that are not essentially different from the scale values obtained from the other scaling methods in popular use.

B. PROCEDURE

1. *The Stimuli*

The stimuli consisted of 20 occupations selected from the entire range of the North-Hatt Scale (3). Use of the entire range insured minimum overlap and ambiguity of the stimuli. The subjects were asked to rate the stimuli according to the status and prestige the general public would give them.

2. *The Sample*

The sample consisted of 80 college students divided equally among two introductory courses in sociology. The group was randomly assigned to the six scaling techniques, the number assigned to each being roughly 20. Approximately half the subjects were given two of the scales. The actual number assigned to each technique was as given in Table 1:

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TABLE 1

Technique	Number of judges
1. Paired comparison	19
2. Ranking technique	19
3. Equal appearing intervals	20
4. Likert technique	20
5. Magnetic board technique	20
6. Graphic technique	19

3. *The Administration and Scoring of Techniques*

The scales were administered by two examiners to the sample during regular class hours. All scales were administered to groups of five or more at one time.

a. Paired comparison. The paired comparison method was scored by a shortcut method suggested by Guilford (2). The total number of choices given to each of the stimuli was computed. The mean number of choices given to any stimulus was employed as the scale value for the stimulus.

b. Ranking technique. The ranking technique was scored by first summing the ranks assigned to any one stimulus, and then computing the mean rank for each stimulus as a measure of scale value.

c. Graphic and magnetic board technique. With both the graphic and magnetic board techniques stimuli were scaled on a 100-point scale. Scale values for both techniques were computed by calculating the mean of the scale values assigned to any one stimulus.

d. Likert technique. On the Likert technique, stimuli were rated on a 5-point scale and scale values were computed by taking the mean value for each stimulus.

e. Equal appearing intervals. Nine sorting categories were used on the equal appearing intervals, and scale values were computed by taking the mean of the judges' placements.

C. RESULTS

After the 20 occupations were scaled for status by the six methods, mean scale values were computed for each stimulus as scaled by each technique. The scale values for the ranking, paired comparison, Likert, and equal appearing intervals techniques were adjusted so that all the scale values would be comparable on a scale ranging from 0 to 100. They appear in Table 2.

The scale values obtained from each technique were intercorrelated.¹ The table was then factor analyzed. A single factor emerged, which is interpreted

TABLE 2
MEAN SCALE VALUES BY THE SIX SCALING TECHNIQUES

Stimulus	Ranking Technique	Magnetic Board Technique	Paired comparison	Graphic Technique	Likert Technique	Equal Appear. Intervals
Barber	36	42	36	37	38	34
Lawyer	86	88	86	87	86	89
U. S. Supreme Ct. Justice	93	99	99	96	99	98
Truck Driver	25	30	19	25	24	22
Minister	82	85	86	82	80	85
Coal Miner	22	29	18	22	20	22
Disk Jockey	46	51	42	51	42	41
Civil Engineer	74	82	78	79	78	76
Bartender	13	27	21	28	28	16
Electrician	46	52	57	47	46	45
Banker	79	77	81	76	72	78
Accountant	62	65	62	64	66	60
Shoe Shiner	5	11	8	11	4	5
Army Captain	61	67	70	66	65	69
Night Watchman	19	24	22	23	28	19
Plumber	36	41	34	37	41	34
Policeman	55	54	57	48	48	51
Pub. Sch. Teacher	68	64	75	63	66	67
Bookkeeper	45	55	49	50	48	49
Garbage Collect.	3	11	6	6	8	3
Mean	48	53	50	50	49	48

TABLE 3
INTERCORRELATIONS AND RESIDUALS

	Paired Comparison	Likert Technique	Equal Appear. Intervals	Magnetic Board Technique	Graphic Technique	Ranking Technique
Paired Comparison	xx	.983	.992	.984	.982	.988
Likert Technique	—001	xx	.989	.991	.993	.982
Equal Appear. Intervals	.003	—002	xx	.994	.992	.994
Magnetic Bd. Technique	—005	.000	—002	xx	.997	.991
Graphic Technique	—006	.003	—003	.002	xx	.997
Ranking Technique	.003	—005	.002	—001	—004	xx

¹ Pearson product-moment.

as *general scale value*. The intercorrelations and residual table are found in Table 3. The factor loadings appear in Table 4.

TABLE 4
FACTOR LOADINGS

	R_1
Paired Comparison	.991
Likert Technique	.993
Equal Appear. Intervals	.998
Magnetic Bd. Technique	.998
Graphic Technique	.997
Ranking Technique	.994

Reliabilities were computed for each of the six techniques. As is shown in Table 5, the paired comparison and the ranking technique seem to be

TABLE 5
RELIABILITIES BY DIFFERENT TECHNIQUES

	Mean reliability for one judge	Reliability for mean scale values
Paired Comparison	.915	.995
Ranking Technique	.877	.993
Equal Appear. Intervals	.854	.991
Graphic Technique	.852	.991
Magnetic Bd. Technique	.847	.991
Likert Technique	.806	.988

superior in reliability for one judge, but for obtaining scale value, all techniques appear to be equal. The reliabilities were computed by a method described by Ebel (1).

The mean standard deviation of the stimulus ratings between judges was compared for all techniques and appears in Table 6. The standard deviation

TABLE 6
MEAN STANDARD DEVIATION OF STIMULUS RATING FOR EACH TECHNIQUE

Paired Comparison	7.360
Ranking Technique	9.310
Graphic Technique	11.065
Equal Appearing Intervals	11.345
Likert Technique	11.880
Magnetic Board Technique	12.695

of each stimulus for each technique was corrected for the differences in the range of scales, according to the following formula:

$$\sigma_{sv} = \frac{100}{n} \sum_{i=1}^n \sigma_i \frac{s_i}{R}$$

Where:

σ_{sv} = mean standard deviation of the stimulus rating.

σ_{s_i} = standard deviation of each stimulus.

R = possible range for scaling technique.

n = number of stimuli.

This data supports the findings of the mean reliability coefficients for one judge in that the paired comparison and the ranking technique show less variability between judges than do the other techniques.

D. DISCUSSION

The study was done for the purpose of evaluating a new technique for scaling. The factor analysis of the six different scaling techniques shows that the magnetic board technique seems to be a satisfactory method for obtaining scale values, since it correlates .998 with the factor of scale value. It might also be noted that all six of the scaling techniques used were equally good measures of scale value, and for any situation where scale values are desired, any one of the six techniques should be satisfactory. In deciding which technique to use, one must go to other criteria such as appeal to subjects, cost, etc.

When one wishes to obtain a rating or scale value on the basis of one judge, there does appear to be a slight difference among the techniques. The individual reliability of the paired comparison appears to be the highest. Ranking also seems to be a more reliable technique for scaling by a single judge. If the number of stimuli is not too large to prohibit the use of paired comparison or ranking, they might be recommended for individual scaling. However, because both of these techniques become cumbersome when a large number of stimuli are used, the other techniques show sufficiently high reliability to be useful for individual scaling.

E. SUMMARY AND CONCLUSION

A study was made comparing six different scaling techniques. Twenty occupations were scaled on status and prestige by all six of the techniques. For obtaining scale values there appears to be little difference between the

techniques used in this study. However, in terms of reliability for an individual judge, the paired comparison and the ranking technique seem to be slightly superior.

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PERSONAL NEEDS AND THE ACCEPTANCE OF A NEW GROUP AS A REFERENCE GROUP*

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A. INTRODUCTION

The rôle of the group in the fulfillment of personal needs has been discussed by psychologists and sociologists in many connections. It has been used as an explanatory principle in discussions of such divergent topics as the development of the normal adolescent (1, 3), the operation of groups and cliques (11, 13, 15), the individual's adjustment to specific kinds of new social milieu (10), and the development of the individual's self-image (2). For the most part, however, discussions have focussed on one kind of need (such as the need for status), or on a limited range of related needs (such as the need for support for transgression of established mores, or a need for a definition of identity). In this paper we propose to examine the relationship between the perceived satisfaction of a complex of needs and the acceptance of a new membership group as a reference group.

The "new group" we used as our focus was a municipal college in an urban setting. Our subjects were lower freshmen, examined before the end of their first semester at the school. We assumed that every subject would have established a number of reference groups prior to his entering this new group. We assumed, further, that many of the prior group memberships would be maintained concurrently with the new one. It seemed logical, also, to expect that the previously accepted groups would have performed the function of meeting the subjects' needs in some measure before he encountered the new group and that the latter, therefore, might have to compete with the former in order to gain acceptance on the same or a more favored basis. This expectation was bolstered by data we had previously collected which indicated that the acquisition of a new reference group is associated with displacement in the previously established hierarchy of the individual's

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¹ The data reported here were collected as part of an exploratory program of studies focussing on the personal and social components associated with the acceptance of new groups as reference groups, conducted under Contract Nonr-1597 (01) with the Group Psychology Branch, Office of Naval Research. This paper is based on materials included in Technical Report No. 6, issued under that contract. John Kunz participated in this phase of the program in the capacity of research assistant.

reference groups (+). In line with this reasoning, several hypotheses were specified for testing.

The simplest of these was stated as follows: The more successful a new group is perceived to be in meeting the personal needs of an individual, the more likely he is to accept it as a reference group.

Because the formulation above did not take account of the historical-relational aspect of the situation, and in order to reflect our assumptions more fully, a second hypothesis was proposed for testing, viz: The more successful a new group is perceived to be in meeting the personal needs of an individual, in comparison with his established groups, the more likely he is to accept it as a reference group.

In addition, to provide for differences in individual patterns of response and of needs, the following was proposed as a supplement to both foregoing hypotheses:

The effectiveness of the new group in meeting the needs of the individual, as shown by the individual's acceptance of the group as a reference group, is defined by the importance assigned by the individual to the needs that the group meets, as well as by the individual's perception of the degree to which given needs have been met by the group.

B. METHOD

1. Subjects

Subjects were 146 unselected male freshmen students in a municipal tuition-free college in an urban setting. Many students attend this institution because they cannot afford to go elsewhere and their feelings about assuming this group membership are frequently ambivalent. Although some evaluate it highly because it offers them their only available opportunity for social mobility, and because it has a reputation for academic excellence, others regard it as inferior to fee colleges in glamor and in the acceptance they assume it is accorded by the general community. Hence, the development of reference group feelings toward it is not routinely associated with nominal group membership.

2. The Selection of "Needs"

As a basis for the questionnaires designed to be measures of need-satisfaction, the following 15 items were chosen from Murray's list of basic human needs: *achievement, deference, order, exhibition, autonomy, affiliation, intrasexuality, succorance, dominance, abasement, nurturance, change, endurance, and aggression*. Three different verbal descriptions were then devised for each need, each description designed to reflect a different form

of expression for the respective need. The complete set of 45 phrases was then presented to about 60 students in general psychology classes, who were asked to rate each phrase on a 5-point scale for degree of importance to the individual. The one description for each need which was given the highest "importance" rating was then selected for use in the final questionnaire, with two exceptions. Because none of the try-out formulations for *exhibition* drew a significant number of high ratings this need was omitted in the final version. Similarly, because two of the *sexuality* formulations drew equally high ratings, both were retained. It was felt that this procedure ensured a mode of expression that was meaningful to the subject population, without significantly reducing the range of needs.

The final list of items was worded as below. The word in parentheses after each item did not appear in the original, but is included here to indicate the need the item was meant to represent.

1. To be regarded as a leader by others (dominance).
2. To engage in social activities with the opposite sex (sexuality).
3. To be successful in matters requiring skill and effort (achievement).
4. To do new and different things (change).
5. To keep things neat and orderly (order).
6. To share and do things with others rather than alone (affiliation).
7. To be regarded as physically attractive by those of the opposite sex (sexuality).
8. To feel free to do what one likes regardless of what others think (autonomy).
9. To help friends when they are in trouble (nurturance).
10. To attack points of view contrary to your own (aggression).
11. To keep at a difficult task until it is finished (endurance).
12. To follow instructions and do what is expected by those in charge (deference).
13. To accept blame when things do not go right (abasement).
14. To have others be sympathetic and understanding about one's personal problems (succorance).
15. To try to understand how others feel about problems (intraception).

Subjects were asked to give three separate sets of responses regarding these items, in accordance with the three sets of instructions reproduced below:

1. Below you will find a list of needs that many people share and try to satisfy. We would like to know how important each of these needs is to you. On the answer sheet indicate its degree of importance to you. Use the following scale to show how important you consider each to be:

A = Extremely important to me, could not be more important.
 B = Is important to a moderate extent.

- C = Has some importance to me, but not much.
 D = Has practically no importance.
 E = Has no importance to me at all.

2. We would like to find out the extent to which some of the needs that many people share are satisfied at _____ College. We realize that you have only been at _____ for a comparatively short time. Nevertheless, you probably have some idea of the extent to which the groups, classes, clubs, activities, and individuals you have encountered here (in other words, your whole experience at _____) meet your needs.

Below you will find a list of needs that many people share and try to satisfy. We would like to know the extent to which _____ College in its various aspects provides you with satisfaction of these needs. Use the following scale to show the extent to which any of the groups, classes, clubs, activities, and individuals you have thus far encountered at _____ provide you with satisfaction of the needs listed.

- A = This need is extremely well satisfied at _____.
 B = This need is moderately well satisfied at _____.
 C = This need is somewhat satisfied at _____, but not much.
 D = _____ offers practically no satisfaction for this need.
 E = This need is not satisfied at all at _____.

3. We would like to find out the extent to which some of the needs that many people share are satisfied by the groups, "crowds," or individuals with whom they spend time or hang out when they are away from the _____ campus. We realize that you may be in touch with many different groups, "crowds," or individuals and we are interested in discovering the extent to which any one or more of them satisfy the various needs you may have.

Below you will find a list of needs that many people share and try to satisfy. We would like to know the extent to which any of the groups or individuals with whom you spend time or hang out with when you are away from _____ College satisfies these needs. Use the following scale to show the extent to which any of the groups, "crowds," or individuals with whom you spend time or hang out with when you are away from _____ College satisfies the needs listed.

- A = This need is extremely well satisfied by my off-campus associates.
 B = This need is moderately well satisfied by my off-campus associates.
 C = This need is somewhat satisfied by my off-campus associates, but not much.
 D = My off-campus associates offer practically no satisfaction for this need.
 E = This need is not satisfied at all by my off-campus associates.

3. *The Measurement of Acceptance*

Acceptance of the college as a reference group was measured by a questionnaire consisting of 58 multiple-choice items, the nature and development

of which has been described in detail elsewhere (6, 7). With a corrected reliability coefficient of .82 (Spearman-Brown formula), and giving considerable evidence of presumptive validity (6) and freedom from susceptibility to response set (7), this questionnaire had given satisfactory evidence of utility in two previous investigations (7, 8).

4. *Administration of the Questionnaires*

The "needs" items were presented as part of a larger questionnaire containing sections on generalized satisfaction-dissatisfaction, values, and mores, in addition to the three sections on "needs." Each set of "needs" items with its respective instructions, was preceded and followed by measures of other personality components, and was thus separated from each of the other "needs" sections.

The questionnaire measuring acceptance and the one containing the "needs" items were administered during two regular sessions of the Freshman Orientation course, about three months after the beginning of the term. One week intervened between the use of the two forms, with the "acceptance" measure being administered first. The tests were administered to fairly large groups of subjects at a time, and involved two sections of the Orientation course, made up of freshmen in the College of Liberal Arts.

5. *Scoring Procedures and Analysis of Data*

Seven scores were derived from the three sets of responses, to indicate the following: (a) degree of personal importance subject attributes to the needs presented (need-importance); (b) degree to which these needs were felt to be satisfied by the new group, the college (*C*-need satisfaction); (c) degree to which these needs were satisfied by other-than-college groups (*OC*-need satisfaction); (d) the balance existing between the new group and other groups in satisfying needs (*C-OC* balance in need satisfaction); (e) the degree of satisfaction obtained through the new group weighted by the importance of the needs to the subject (*C*-net need satisfaction); (f) the degree of satisfaction obtained through other groups weighted by the importance of the needs to the subject (*OC*-net need satisfaction); (g) balance existing between the net satisfaction obtained through the new group and through other groups (*C-OC* balance, net need satisfaction).

The scoring procedure was as follows:

Scores a, b, c. Based on a five-point multiple-choice scale for individual items:

$$A = 4 \quad B = 3 \quad C = 2 \quad D = 1 \quad E = 0$$

Total score was the sum of all the individual item scores.

Score d. Total score for *b* minus total score for *c*.

Score e. Each item score for *b* multiplied by the score for that item on *a*, the sum of the weighted item scores making up the total score.

Score f. Each item score for *c* multiplied by the score for that item on *a*, the sum of the weighted item scores making up the total score.

Score g. Total score for *e* minus the total score for *f*.

The rationale for scores *a*, *b*, and *c* above seems obvious. Score *d* was conceived as a quantification of the comparison between the new group and other groups: a relatively high *c* score was interpreted as indicating a balance in favor of the new group in the function of need-satisfaction. A positive correlation between the *d* score and the "acceptance" score would be interpreted as an indication that the second hypothesis was correct.

The scores for *e*, *f*, and *g*, which we have called "net" scores, were devised to incorporate the element of "importance" into the need satisfaction score. On logical grounds, it seemed reasonable to assume that the satisfaction of needs the subject considered relatively important would have a stronger positive impact than the satisfaction of relatively unimportant needs. The specific weighting technique was chosen arbitrarily, on the basis of logic, simplicity, and demonstrated utility.

C. RESULTS

The correlations between the various "needs" scores and the "acceptance" measure are presented in Table 1.

TABLE 1
CORRELATIONS BETWEEN "NEEDS" SCORES AND ACCEPTANCE OF THE NEW GROUP
(*N* = 146)

"Need score"	<i>r</i>	<i>p</i>
<i>a.</i> Need importance		
<i>b.</i> C-need satisfaction	.30	<.001
<i>c.</i> OC-need satisfaction	.44	<.001
<i>d.</i> Balance C-OC, need satisfaction	.16	.03
<i>e.</i> C-"net" need satisfaction	.24	.002
<i>f.</i> OC-"net" need satisfaction	.51	<.001
<i>g.</i> Balance C-OC, "net" need satisfaction	.27	<.001
	.28	<.001

The correlations presented in Table 1 support all our hypotheses, but present some unexpected aspects. For example, it is interesting that the simple need-importance score correlated significantly with the acceptance measure. Does this mean that we chose the kinds of needs that are most likely to be satisfied in this group, and that therefore those to whom these

needs are not important would tend to accept the group less? Or does it mean that those who are aware of their needs and acknowledge their importance are more likely to be aware of their fulfillment and therefore more accepting of the group through which fulfillment comes? If the latter is the case, *a* and *b* should be significantly correlated. Table 2 presents the inter-correlations among the three basic "needs" measures.

TABLE 2
INTER-CORRELATIONS AMONG BASIC "NEEDS" SCORES

Score	<i>b</i>	<i>c</i>	<i>d</i>
<i>a</i> . Need importance	.32	.24	.09
<i>b</i> . C need satisfaction	—	.46	
<i>c</i> . OC need satisfaction		—	
<i>d</i> . C-OC balance, need satisfaction			—

Table 2 presents inter-correlations only between the scores that were derived independently of each other. Our three basic scores, *a*, *b*, and *c* are clearly interrelated, a fact that could be interpreted to support our suggestion that the function measured by the need-importance score may also be partly responsible for the need-satisfaction scores. However, the fact that the *C*-need-satisfaction scores are much more highly correlated ($r = .46$) with acceptance of the college group than are the *OC*-need-satisfaction scores ($r = .16$) confirms the suggestion that the complex of needs which are important to our subjects are more congruent with the college as a group than with the subjects' other groups.

The temptation to think in generalized personality terms is increased by the substantial correlation between scores *b* and *c* in Table 2; this suggests that individuals who consider their needs important are also likely to feel that their needs are satisfied in a variety of groups, and are therefore more likely to accept almost any new group more easily than those who assign a low degree of importance to their needs. This hypothesis receives some support from the results of a previous study by the writer, reported elsewhere (7, 8), which strongly suggested the operation of a generalized "acceptant" tendency in association with ready identification with a new reference group.

It is of some further interest to note that the "balance" scores *d* and *g*, in Table 1, are less highly correlated with acceptance of the group than are the gross scores, *b* and *f*; we had assumed that they would be the more sensitive indicators. Does this mean that the balance of forces between the new group and the individual's other groups is less important than the sheer amount of satisfaction offered by the new group per se? Or is this simply

an artifact, traceable to the defects of the measures we have used? The size of the correlation could have been affected by a restriction in the range of scores resulting from the subtraction procedure or it might be related to the reliability of the measures involved. The coefficients of reliability for the latter are presented in Table 3.

TABLE 3
COEFFICIENTS OF RELIABILITY FOR THREE "NEEDS" QUESTIONNAIRES

Name of score	<i>r</i>
a. Need importance	.72
b. C-need satisfaction	.83
c. OC-need satisfaction	.87

Note—All coefficients are derived from a comparison of odd-versus-even items, and are presented as corrected by the Spearman-Brown formula.

Inspection of Table 3 reveals such similarity among the coefficients of reliability as to suggest that the answer to our query does not lie there. To check on the "reduction of range" hypothesis, we might compare the means and *SD* of one of the gross scores and its companion "balance" score, given in Table 4. Obviously, although the "balance" score, *g*, deals in smaller

TABLE 4

	\bar{X}	<i>SD</i>
Score <i>f</i> (gross)	127.32	30.96
Score <i>g</i> ("balance")	70.88	28.24

numbers, the ranges are about the same. Therefore, this explanation does not seem to be the correct one. We are left with the suggestion that the absolute rather than the comparative degree of need fulfillment offered by a given group may be the significant variable.

Further study of Table 2 suggests another line of reasoning. The fact that the "balance" score *d* correlates minimally with the "importance" score suggests that it might be serving the purpose of screening out the element common to all three scores, *a*, *b*, and *c*, which we have discussed above, which we might call enthusiasm or self-acknowledgement or a tendency toward strongly positive responses. If that inference is correct, the correlation between "balance" score *d* and the acceptance measure (.24) might be indicating more accurately the amount of variance in the latter measure attributable to the need-satisfaction per se offered by the college than the higher correlations between the acceptance measure and the other two relevant scores, designated respectively as *b* and *c* in Table 1.

We cannot, however, dismiss the possibility that a tendency toward a

generalized kind of positive response may be inflating the correlations with our criterion measure as unimportant. We suggest that this response tendency, if, indeed, it exists apart from response to the substance of our questionnaire items, is an indicator of an important and pervasive element in the individual's response to the world about him and may in itself predispose him to a facile identification with a new group. We base this interpretation of these data on the fact that the structure of the "acceptance" measure does not encourage any kind of response tendency that is divorced from the substance of the items to which the response is being made. Of 12 items (out of 58) in which a "tendency to agree" might operate, six "agrees" would receive a positive rating, and six would receive a negative rating, thus cancelling out any significant effect on the final score. Yet, we persistently find individuals who tend to use the high positive end of the rating scales on the auxiliary questionnaires turning in scores toward the upper end of the "acceptance" range. We interpret this to mean either that their choice of response on the "needs" scales is not a function of a "response tendency" divorced from substantive meaning, or that such a response tendency is itself of diagnostic and predictive value in relation to our objectives.

D. SUMMARY

This paper reports an investigation of the relationship between the perceived ability of a group to satisfy the needs of its members and the acceptance of that group as a reference group. Subjects were 146 male freshmen at a municipal college, and data was obtained by means of questionnaires. While all hypotheses were supported by the data, they seemed to indicate that the absolute level of the ability of a given group to fulfill the needs of its members is more significant than its comparative standing in this respect in relation to other membership groups. The data were also interpreted to suggest the operation of a general personality tendency, evidenced by the comparative importance assigned to one's needs, in association with a tendency to the ready acceptance of a new group as a reference group.

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ON THE DISAPPEARANCE OF KNICKERS: HYPOTHESES FOR THE FUNCTIONAL ANALYSIS OF THE PSYCHOLOGY OF CLOTHING*

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A. INTRODUCTION

There are those of us for whom the rustling sound of corduroy has for many years been associated with memories of the almost indestructible knee-length trousers of our childhood. These memories, though not always pleasant, have gained enhanced value in recent years because of the disappearance of knickers from the American scene, a disappearance which, despite the fact that it occurred over a brief span of years (between the 1930's and early 1940's), passed relatively unnoticed and unremarked upon. Although the style of dress of women has changed frequently, markedly, and to the accompaniment of great public clamor, over the past half-century, the stability of dress of both men and children has been such as to lead one to think that any fundamental change in the dress styles of either would be an event rich in its psychological implications.

Whether or not this is the case, there seems to have been no widespread attempt to mine this field since the publication of *The Psychology of Clothes* by Flügel in 1930 (4). At about that time, psychological articles on and interest in this area disappeared, as quickly and quietly as did knickers, and except for sporadic studies based on limited clinical material, the field has remained quiescent.

This article is an attempt to supplement previous work in this field by proposing in the form of hypotheses susceptible to more rigorous examination than is here attempted, a possibly more comprehensive and parsimonious explanation for changes in dress than is currently extant.

B. THEORIES OF ORIGIN

Early work in this field, which is comprehensively reviewed by Flügel (4), was done mostly by anthropologists and sociologists, Westermarck (9) most notable among them. Their observations were seized upon by Ellis (3), and

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incorporated into the first volume of his *Psychology of Sex*. All of this work is much concerned with explaining the origins of the use of clothing. This is attempted by deductions from function to origin, unhappily assuming that what "ruder" societies are, more civilized ones once were. Dunlap (2) has summarized the various origin theories proposed through 1926 under the headings of the Modesty, Immodesty, Adornment, and Protection theories. The first three, generally most popular, he dismisses as conflicting and improbable, and while accepting the protection theory in essence, limits it to protection from flying insects by the use of tassled or hanging clothing rather than protection from climate or rough terrain. Flügel has attempted to synthesize the Adornment and Protection theories by proposing that the original clothing articles were used for magical protection from harm.

C. CLOTHING FUNCTIONS

Regardless of the validity of any of these theories with regard to *origins*, it is apparent that all of them describe *functions* of clothing. These may be subsumed under three headings: (a) Protection of the body against harm. (b) Concealment (or display) of parts of the body. (c) Differentiation (through decoration and adornment) of one individual or group from another.

Most theorists, including Dunlap and Flügel, believe that the most essential function of clothing has been that of differentiation, certainly in all graphically communicating societies. Veblen (8), in his "conspicuousness" theories, has provided an excellent rationale for this insofar as leisure classes and the assimilation of their values in other classes is concerned, but the same hypothesis may be equally well employed to indicate that the use of clothing for differentiation cuts across several of the various possibilities for kinds of differentiation within a society or from one society to another.

Stereotypically oriented people, for example, still perceive various alien groups in terms of societal "uniforms." Such people anticipate Polynesians in sarongs and Eskimos in snowsuits, and few indeed have yet given up these notions as totally inadequate. Even without such overgeneralization, however, classes and castes are often quite legitimately differentiated on a clothing basis, sometimes by very simple means, such as the uniforms of soldiers *et al.* or the turned collars of Catholic clergymen. In already limited subgroups, moreover, such as the military, differentiations may be reflected by as little as the design of clothing insignia or as much as totally different colored and fitted uniforms.

D. CLOTHING DIFFERENCES AND SOCIAL RÔLE

If we accept the assumption of the preeminence of differentiation among clothing functions, we might expect its use in this fashion to correlate highly with the *significance of the difference it makes within a culture*, so that the less important it is to differentiate people along a particular dimension, the less likely clothing will be the means of doing it. The importance for an individual then, of a given social rôle, as well as the intensity of his rôle taking (self-concept) (1), will frequently be reflected in his clothing. More broadly stated, we may hypothesize that *differences in modes of dress within a particular society are indicative of differences in social rôles and self-concepts of members of that society*.

To illustrate, let us return to the example of clergymen's dress. Roman Catholic priests, as opposed to Protestant ministers of most denominations, are easily differentiated from parishioners by their clothing. When we explore the respective religious functions (social rôles) of these clergymen, we find that the difference in their dress is explicable by the above premise. In the Catholic conception, the priest is a divinely ordained representative of God, whose function allows his relatively direct intervention with divine forces on the behalf of his parishioners. This is not, on the whole, true of Protestant ministers, whose rôle is more nearly that of the wise leader than of one of superordinate position. Since this rôle differentiates him less from his parishioner than does that of the priest from his, it is less necessary for the difference to be implicitly stated through such obtuse means as clothing.

The reader may observe that this illustration, like its predecessor, is of a cross-sectional sort, i.e., concerns itself with a few of many concurrent social rôles. An equally significant source of information for the social scientist may lie in the possibility that social rôle and self-concept are also longitudinally reflected in clothing modes, so that *changes over a period of time*, in the clothing of any subgroup of society, may reflect changes both in the rôle attached to that group by society, and in its corollary, the self-concepts of the individuals composing the group. In the light of economic factors however, such as the provision by designers of new styles of clothes before old garments have worn out, this hypothesis must be more tenuously stated, to the effect that *changes in fundamental or enduring modes of dress in a society are indicative of changes in the social rôles and self-concepts of members of that society*.

Economic factors which provide frequent, minor style changes grossly out of proportion to utilitarian needs do, indeed, tend to muddy the waters of investigation of stable clothing changes. The very ability, however, of such changes to find markets, as well as the selectivity responsible for the success of

one frill and failure of another, must be accounted for in terms of motivational determinants as well. In this connection, it is noteworthy that clothing designers have repeatedly pointed out that such psychological factors as aspirations and fantasies play a highly significant rôle in determining the extent to which clothing innovations meet with acceptance. Since aspirations and fantasies are intimately related to social rôle and self-concept (1), one would expect a relationship between the frequency with which clothing styles vary in *any* direction and the stability of social rôles and self-concepts of the groups for which they vary.

The immense variability in the clothing styles of women and of adolescents, in conjunction with the indefiniteness of rôles assigned and conflicting demands made upon them in American culture (5), illustrates the relationship between stability of dress and stability of rôle stated above. Converse illustrations of the identical relationship may be sought in the "conservative" dress of businessmen and three-cornered habiliments of infancy. These phenomena, we believe, lend themselves to generalization in the form of the following hypothesis: *The greater the variability of clothing styles in a society, the less well-defined and conflict-free are social rôles in that society and, conversely, the smaller the variability of clothing styles in a society, the more enduring, clearly defined, and conflict-free are the social rôles of individuals in that society.*

E. TESTING THE HYPOTHESES: ANALYSIS OF KNICKERS

One of the most difficult and persistent problems in the field of the psychology of clothing is that of subjecting hypotheses to empirical test. Unfortunately, the justification for many of the existing hypotheses in this area seems to lie mainly in their face validity rather than in extensive empirical validation. Furthermore, because of their lack of amenability to empirical test, it is doubtful if they can ever achieve anything more than face validity.

For this reason, we have attempted to present a series of hypotheses which lend themselves readily to repeated empirical test. By offering functional hypotheses, we feel, the study of correlative phenomena relevant to personality theory is encouraged, rather than the necessarily deductive search for constructs whose chief value may be historic. These hypotheses are themselves subject to further delimitation in terms of operational, quantifiable definitions. Prevalences or dearths of styles, for example, may be determined from samplings of mass communications media, such as the illustrations and advertisements of magazines and newspapers and the clothing worn on television, movies, and the legitimate theater, or from direct observations of what people are wearing under different circumstances and what shop windows are dis-

playing. Social rôles may be measured in terms of income, dwelling types and costs, occupations, educational attainments, etc., as has already been so fruitfully begun by sociologists and cultural anthropologists.

By way of illustration, we shall attempt, in the remainder of this article, to anecdotally apply the above hypotheses to the social rôle of the prepubescent boy as reflected in a fundamental change in his wardrobe.

Despite considerable overlap, it was possible, until the beginning of the Second World War, to distinguish most American boys younger than six or seven from those between the ages of seven and puberty, in that those in their preschool years generally wore shorts, while those in grammar school wore knickers. It was further possible to distinguish the prepubescent boy from the adolescent on a similar basis, namely the former's wearing of knickers and the latter's wearing of long trousers. The extent to which the receipt of one's first pair of long pants was associated with pubertal ceremonies, the anxious and pleasurable anticipation attending the first wearing of these pants, and the perception of this event as an affirmation of impending manhood, indicates the degree to which *differences in trousers were used as a means of differentiating one stage of development from another*, this change having something of the import of a *rite de passage*.

There were, incidentally, some noteworthy group differences in the wearing of knickers, primarily between urban and rural prepubescent boys. The farm boy, who was expected to assume considerable responsibility at an early age, rarely wore knickers. On those infrequent, relatively formal occasions when he did, he was expected to "mind his manners," that is, to conform to the social stereotype of his more "refined" city brethren. Within the urban community, children of the lower classes who, like the farm boy, assumed adult responsibility at an early age, began wearing knickers earlier than did children of the middle class and gave them up in favor of "longies" before puberty. We see here a demonstration of rôle differences extending even within one group, but still reflected in a clothing style.¹

In recent years, however, trouser differences have become inadequate for distinguishing between boys of different age groups. By the middle 1930's, pre-school and prepubescent boys had taken more and more to wearing long pants, and around 1940 knickers were given up entirely. In attempting to account for their disappearance at this particular time, we find two possible

¹ Intragroup differences are partially accounted for by the American historical tradition of *sans coulottes* among rural dwellers and kneepants among members of the urban upper classes. Wearing of kneepants by children of various economic groups was originally perhaps, an attempt by their parents to emulate the upper classes, but the concept of "leisure," reflected in kneepants, has been translated as "non-productiveness" for children.

explanations. Though they may or may not be related in complementary fashion, the employment of either or both seems to reflect that, within recent years, a fundamental *change has taken place in the social rôle of the prepubescent boy*.

The first explanation is that there has come to be an increasing popular recognition and, possibly, acceptance of the emotional needs of children, particularly those of preschool and prepubescent age. This is reflected in such phenomena as the growth of the Mental Health movement, the popularity of psychology as a subject of school curricula, the growth of popular periodicals dealing exclusively with raising children, the sales of publications such as Spock's (7), increased emphasis in teacher training on emotional aspects of development, and the broad popularization of the idea that psychological difficulties are at the roots of a whole host of familial and social maladies. The sum of such phenomena is that the Victorian ideal of children as small adults to be kept from underfoot has little popular status at present. Because of this increased favorable attention paid him, the prepubescent boy probably exists far less than previously in a psychological no-man's land between the joys and delights of childhood and the fancied prerogatives and maturity of adolescence, the age so aptly described by psychoanalysts as the latency period.

The second explanation involves the current increasing trend observed toward uniformity and conformity in our society (6). This trend may be largely a function of the progressing dominance of middle-class values in America which, because of the enormous size of its middle class, and a national historic ideal of classlessness, is a suitable ground for the assimilation of all class values under a middle-class standard. The trend probably received significant impetus as a result of our entry into World War II, when it became necessary for the entire nation to focus upon the one great goal of defeating our enemies. In such circumstances, the luxuries of group differentiations are largely abandoned, and this relaxation of boundaries between socioeconomic groups may also extend somewhat to the developmental strata within each. The prepubescent boy was affected in such a way that he was expected to mature earlier, assume more responsibilities, and devote less time to living in a state of hibernation. This increasing trend to uniformity, at least in its initial phase, seems to have served the purpose of permitting him greater freedom as well.

The coexistence of the narrow range of clothing styles which, in the past, children were expected to wear, and the rôle of the prepubescent boy, which has been defined in terms of a latency period from Freud's time to our own, also appears to reflect a more than accidental relationship. Unlike the pre-

school child, whose dress tended to change frequently with the development of his physical and psychological self, the prepubescent boy, who also passed through significant stages of physical development, formerly found himself simply wearing longer and longer knickers rather than differently styled trousers. When changes did occur, they came earlier to the preschool child than to the prepubescent one. In recent times however, as the prepubescent has been allowed to develop new rôles in some strata of society, old ones have not yet been relinquished in others. From the middle class "children should be seen and not heard" philosophy of an earlier day, we have progressed to a greater confusion of philosophies and expectations, so that the total variance of social stereotypes and expectations has markedly increased for this group. With some faithfulness, *variability in apparel of this group has increased with the decrease in the stability of common perceptions and expectations of it.*

Thus, the development of this one phenomenon over a period of time may be accounted for by the above proposed hypotheses. Many more changes than these have taken place, however, in the clothing of men, women, and children alike. As with knickers, these changes are in many cases demonstrably connected with changes in standards of acceptability and demands for achievement in our society, the implications of which go far beyond the use of clothing itself. Their study, we feel, presents the social scientist with a rich and relatively untapped field of investigation, from which significant structural psychological changes throughout society could be rapidly recorded and easily validated.

A further article, now in preparation, will deal with some of the rôle changes reflected in changes in modes of dress of American adults over the past several years.

F. SUMMARY

This article presents a rationale for the formulation of three hypotheses for the analysis of the differentiation function of clothing in terms of the social rôles and self-concepts of wearers of particular articles. These are:

1. Differences in modes of dress within a particular society are indicative of differences in social rôles and self-concepts of members of that society.

2. Changes in fundamental or enduring modes of dress in a society are indicative of changes in the social rôles and self-concepts of members of that society.

3. The greater or smaller the variability of clothing styles in a society, the less or more respectively well-defined and conflict-free are social rôles in that society.

In illustration of the applicability of these hypotheses, an analysis of the

differentiation function served by the wearing of knickers and the rôle changes of prepubescent boys which accompanied their disappearance was presented. A further article will attempt a similar analysis for changes in the habit of American adults.

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INFLUENCE OF EXPERIENCE WITH CONFLICTING INFORMATION ON REACTIONS TO SUBSEQUENT CONFLICTING INFORMATION*

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A. PROBLEM

The present investigation is concerned with evaluating the effects of experience with conflicting information on reactions to subsequent conflicting information. The latter is in the form of a written communication, one paragraph in length, which describes an individual's behavior during the day and which is inconsistent in the sense that one half portrays a rather extroverted behavioral pattern while the second half portrays a different, rather introverted behavioral pattern. Previous studies (1), using this communication, have revealed a tendency toward primacy effect, that is, a tendency for the first half of the communication to be more influential than the second half in determining the impression which arises. Various experimental attempts to reduce primacy effect (1) were successful, with some of the attempts yielding recency effect, a tendency for the last part of the communication to be the more influential. The present investigation also was conducted primarily in an attempt to reduce primacy effect. Specifically, we were interested in the following questions:

1. What would happen to primacy effect if, prior to receiving the one-paragraph communication, subjects received (and answered questions about) the components of this communication, with each component presented as a distinct paragraph and with conflicting components in adjacent order rather than separated by other information as in the one-paragraph communication? In other words, what would happen to primacy effect if subjects were given prior experience with the components of the communication, when the content of the components was unaltered but the order was changed so that the distance between conflicting information was minimized?

2. What would happen to primacy effect if the components, instead of being taken from the same communication that subjects subsequently received, were taken from another written communication which also described

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an extrovertive behavioral pattern in one half and an introvertive pattern in the other half? Here the content of the components received as distinct paragraphs differed from the content of the subsequent communication.

3. What would happen to primacy effect if subjects were or were not told that all of the components (received prior to the one-paragraph communication) pertained to one person in an attempt to get them to assimilate, integrate, or account for conflicting information?

B. METHOD

1. Procedures

a. Group 1 (standard conditions). This procedure allowed no prior experience with components of a communication. Each subject received a mimeographed booklet, the first page of which contained a one-paragraph communication about a person named Jim. Subsequent pages of the booklet contained a questionnaire, (1, pp. 187-89), designed to tap the subject's impression of Jim. The introductory instructions were as follows:

In everyday life we sometimes form impressions of people based on what we read or hear about them. You will be given a paragraph about someone named Jim. Please read the paragraph through only once and then answer the questions about Jim.

Half of the subjects received what may be called the *EI* communication, with the extrovertive behavioral pattern described in the first part and the introvertive pattern in the second part, while the others received the *IE* communication, with the introvertive pattern described before the extrovertive pattern. The questionnaire, which was to be answered in the booklet, was the same for all subjects.

b. Group 2 (different components). In this group (as well as in Groups 3, 4, and 5) each subject received a mimeographed sheet of paper containing eight paragraphs, numbered from 1 through 8, together with the following initial instructions:

The purpose of this experiment is to discover how people form impressions of other people on the basis of what they have read or heard about them. These paragraphs describe human behavior and actions. Please read them through carefully once.

The eight paragraphs received by each subject in Group 2 were the following:

1. He was invited to a party and after much persuasion by his mother he went.
2. At school he was an active participant in classroom discussions.

He spoke his mind freely, even challenging remarks of fellow students and the instructor.

3. It was not unusual to see him in the corridor or on the campus engaged in heated discussion with a group of students.

4. Greeting his host who was alone, he engaged him in a discussion until two boys and a girl walked in. The host greeted them and spoke with them while he stood by saying nothing.

5. He sat down near one of the windows and looked outside while everybody sat chatting and talking over all the latest gossip.

6. He was well liked by students in and out of class and well known for his joking and kidding.

7. When everyone circled around the piano to sing and to tell stories, he edged over to them taking a seat near the door. He did not participate, but after a while got up and quietly left.

8. He was president of one of the student societies and secretary of another.

These eight paragraphs had been components of a one-paragraph communication (about a person named Harry), where Paragraphs 1, 4, 5, 7, in that order, had constituted the introvertive portion and Paragraphs 2, 3, 6, 8, in that order, the extrovertive portion of the communication (except for interchange of the words "he" and "Harry" and with the components unnumbered in the one-paragraph format).

When the subject indicated that he had finished reading the eight paragraphs, the experimenter verbally assigned various tasks to be answered in writing. The subject was permitted to look at the mimeographed sheet or to reread the paragraphs if he wished to do so. One task was given only after the previous one was completed. The tasks, in the order assigned, were as follows:

I. Write a brief impression of what you have read, telling in it whether you get an impression of one person or more than one person. (If the subject did not seem to understand the task, the experimenter added:) Usually when we read about a person or persons we get some impression. I want you to write your impression of what you just read.

II. Do you get a clearcut impression of a person or persons?

III. If you get a clearcut impression, what is it? If you don't, what seems to be interfering?

IV. Pick out those paragraphs which seem to give a consistent picture of one person and write down their numbers together. Below this write down the numbers of those which don't seem to fit.

V. State briefly why you made the groupings as you did.

VI. Could you possibly see all these actions as belonging to one person? If you can, under what circumstances and if not, why not?

After these tasks, the mimeographed booklet used under standard conditions

(Group 1) was given to the subjects, with half of them receiving the *EI* communication about Jim and the others the *IE* communication about Jim. Each subject was told, "Will you please read this paragraph through carefully once." After the subject finished reading, he was told, "Now will you answer the following questionnaire on it. Go right through it."

After the questionnaire was answered, the subject was asked:

Did you notice any similarity between the jumbled paragraphs that you read at the beginning of the experiment and the later paragraph that you read? If you did, what similarities did you notice?

Did your impression change between the time that you read the paragraphs in the first part of the experiment and the time that you finished reading the paragraph in the last part of the experiment?

c. *Group 3* (different components referred to one person). The procedure differed from that used with Group 2 only with respect to what intervened between the completion of Task VI and the presentation of the mimeographed booklet. Immediately after the subject finished Task VI he was told by the experimenter that all eight paragraphs referred to one person, that they were taken from a description of a boy which appeared in a book but that the order of the sentences had been mixed up. The subject was then asked, "Can you explain how one person could have shown all these actions?" If the subject insisted that all the actions could not have been shown by one person, the experimenter reiterated that they did all refer to one person and persisted in asking the subject to explain how this could have happened. In short, the experimenter attempted to force the subject to account for or to integrate or assimilate the conflicting information contained in the eight paragraphs.

d. *Group 4* (same components). The procedure used here differed from that used in Group 2 only with respect to the content of the eight paragraphs on the mimeographed sheet which were as follows:

1. After school he left the classroom alone. Leaving the school he started on his long walk home. The street was brilliantly filled with sunshine but he walked down on the shady side.

2. He left the house to get some stationery. He walked out into the sun-filled street with two of his friends and they enjoyed the sunshine as they walked.

3. On his way he met the girl to whom he had been introduced the night before and they talked for a short while.

4. Coming down the street toward him, he saw the pretty girl whom he had met on the previous evening. He crossed the street to avoid meeting her.

5. He entered a candy store. The store was crowded with students and though he noticed a few familiar faces, he waited quietly until the counterman caught his eye and then gave him his order.

6. He entered the stationery store which was full of people. He talked with an acquaintance while he waited for the clerk to catch his eye.

7. He received his drink and sat down at a side table. When he had finished he walked home alone.

8. On his way out, he stopped to chat with a school friend who had just come into the store. Leaving the store together, they walked toward school.

Thus here, unlike what happened in Groups 2 and 3, subjects were provided experience with components of the one-paragraph communication which they subsequently received. Paragraphs 1, 4, 5, 7, in that order, constituted the introvertive portion and Paragraphs 2, 3, 6, 8, in that order, the extrovertive portion of the subsequent communication wherein the components were neither numbered nor separated by paragraph indentations and the word "Jim" appeared eight times in place of the word "he."

e. Group 5 (same components referred to one person). The procedure differed from that used in Group 4 only in that, after Task VI, subjects received the additional information and task just as in Group 3. Otherwise expressed, the procedure differed from that used in Group 3 in that the eight components were from the Jim-communication as in Group 4.

2. Subjects

The subjects in Groups 2 through 5 were 80 female college students in Montreal, Canada. Each of the experimental treatments in Groups 2 through 5 were administered individually to 20 subjects with the assistance of Nancy Sidorsky and Louise Steiner. The subjects who received the *EI* communication constitute the *EI* group; those who received the *IE* communication constitute the *IE* group.

Group 1, whose results were described elsewhere (1, pp. 48-54), consisted of high school seniors and college lower classmen in Montreal with 87 in the *EI* group and 89 in the *IE* group. The experiment was administered individually to Group 1 or to small groups of from two to six subjects.

3. Analysis of Responses

For the mode of analysis of responses to the questionnaire that followed the one-paragraph communication, see (1, p. 49). In general, responses were scored as *E* responses if they reflected the predominant influence of the extrovertive portion of the communication, as *I* responses if they reflected the predominant influence of the introvertive portion. The score of *None* was assigned to an item if the subject failed to answer it. The score of *Other* was assigned if neither the *None*, *E*, or *I* score seemed to be applicable, for

example, if the response reflected the equal influence of both portions of the communication or if the response seemed irrelevant to the task.

In order to study whether the obtained group trends supported primacy (the greater influence of the lead part of the communication) or recency (the greater influence of the last part), for each experimental treatment we applied these indices:

Index 1: Percentage *E* responses in Group *EI* minus percentage *E* response in Group *IE*. A positive number signifies primacy (since it means that *E* responses are more predominant when the extroverted portion is given first than when it is given second), and a negative number indicates recency.

Index 2: Percentage *I* responses in Group *IE* minus percentage *I* responses in Group *EI*. Here also a positive number indicates primacy (since it means that *I* responses are more predominant when the introverted portion is given first than when it is given second), and a negative quantity recency.

Mean Index: This is the mean of the numbers yielded by Index 1 and Index 2.

4. *Expectations*

An hypothesis has been advanced (1, pp. 62-64) that primacy is in the nature of an *Einstellung*, an hypothesis suggested by certain similarities between the organization of the one-paragraph communication concerning Jim and the organization of a series of volume-measuring problems used in studying *Einstellung* effects (2).

The series of problem-solving tasks, involving measurement of volume, begins with several problems which are similar in appearance, all of which may be solved by one (rather complex) method. They are followed immediately by further problems, also similar in appearance, which may be solved by the oft-repeated method but also by simpler, more direct methods. Many subjects showed *Einstellung* effects, in that they utilized the oft-repeated method in solving the test problems while overlooking the more direct methods of solution.

A parallel may be drawn between the first block of the combined communication and the set-inducing problems. Just as the problems are homogeneous in nature, similar in appearance and in pattern of solution, so the first block of information [the first part of the one-paragraph communication] is homogeneous in nature, consisting of a series of described actions all of which imply one pattern of behavior. The second block is in some respects similar to the test problems. The latter are linked to the set-inducing problems by their both being volume-measuring problems and by the homogeneity of the temporal sequence in which the two sets are presented. Likewise, the

second block of the communication is closely linked to the first by their both pertaining to Jim and by the homogeneity of the temporal sequence in which the subject perceives them. Similarity of situational contexts in the two blocks may also have contributed to the apparent unitary nature of the communication (1, pp. 62-63).

Experimental variations that tended to minimize (or maximize) *Einstellung* effects in the volume-measuring problems have suggested certain experimental variations that tended to decrease (or increase) primacy effects following the one-paragraph concerning Jim (see 1). The present experiments were also suggested by variations involving the volume-measuring problems. It was found that little or no *Einstellung* effect resulted when set-inducing volume-measuring problems were intermingled with test problems. Preliminary experiments showed that *E* effects were lower in the usual series of volume-measuring problems when it was preceded by the intermingled series than when it was given alone. *E* effects proved to be somewhat lower when the intermingled problems were identical in content with problems of the usual series than when they did not correspond, content-wise, to problems of the usual series.

An analogy may be drawn between the series of eight paragraphs which the subjects in Groups 2 through 5 received before the one-paragraph communication and the intermingled series of volume-measuring problems. Just as paragraphs which described introverted behavior were intermingled with paragraphs which described extroverted behavior, so set-inducing problems were intermingled with test problems. If primacy effects are in the nature of *Einstellung* effects, and if factors which apparently weakened the *Einstellung* in the volume-measuring problems are similarly effective with regard to primacy, then we might expect to find less primacy effects for Groups 2 through 5 than for Group 1 which was not given prior experience with the intermingled paragraphs. Also, if the introduced factors follow the pattern of relative efficacy shown by analogous factors in weakening the *Einstellung* in the volume-measuring problems, then Groups 4 and 5, for whom the intermingled paragraphs were virtually identical in content with components of the subsequent communication, might be expected to show less primacy effects than Groups 2 and 3 for whom the intermingled paragraphs were not similar in content to components of the subsequent communication. There is no precise parallel between the additional information given to Groups 3 and 5 (that all eight paragraphs refer to one person) and factors introduced in the experiments involving volume-measuring problems. However, to the extent that the additional information helps to relate the intermingled paragraphs to the subsequent communication, which also pertains to one person,

and to the extent that it helps the subject to integrate conflicting information, it might be expected that the additional information would tend to reduce primacy effect. Thus, Group 3 might be expected to show less primacy effect than Group 2 and Group 5 to show less primacy effect than Group 4. Specifically, then, the following expectations are offered: (a) that Groups 2 through 5 should show less primacy effect than Group 1, (b) that Group 4 should show less primacy effect than Group 2, (c) that Group 5 should show less primacy effect than Group 3, (d) that Group 3 should show less primacy effect than Group 2, (e) that Group 5 should show less primacy effect than Group 4.

Experiments on the volume-measuring problems do not allow any predictions to be drawn concerning the relative rankings with regard to primacy effects of Groups 3 and 4 since we do not know how the factors introduced in Group 3 (paragraphs that differed from components of the subsequent communication and, in addition, the information that the eight paragraphs referred to one person) compare in their influence on primacy effects with the factors introduced in Group 4 (paragraphs that were virtually identical with components of the subsequent communication but no additional information that the eight paragraphs referred to one person).

In short, we might expect primacy effects to decrease, or, at least, to decrease monotonically (that is, not to increase) from Groups 1 through 5, with the possible exception of the relative rankings of Groups 3 and 4.

C. RESULTS

Since our chief interest in this report is with the primacy effect shown in the questionnaire that followed the one-paragraph communication, we shall only briefly outline responses to the tasks prior to this communication (see 3 for a detailed description of similar responses). Most subjects, after reading the eight paragraphs (components), reported that two people were or might be involved and separated the components according to whether they described one or another behavioral pattern. Thus in response to Task IV most subjects wrote the numbers 1, 4, 5, 7 (introverted components) on one line and the numbers 2, 3, 6, 8 (extroverted components) on another line and wrote, in response to Task V, that they made these groupings because they referred to two different people or types of people or kinds of behavior or moods. In response to Task VI most subjects said that the actions could not belong to one person. However, in Groups 3 and 5, where the experimenter added that one person was the referent of the eight paragraphs and insisted that the subject explain how this could have happened, all subjects finally agreed, after more or less prodding by the experimenter, that under certain circumstances,

the actions could all have been performed by one person. Some did so only conditionally, writing, for example, "If they really pertain to one person, then it might be that . . ." or "If you [the experimenter] are telling the truth, then perhaps what happened was that . . ." To account for all the actions being performed by one person, and to assimilate or integrate conflicting information, subjects generally appealed to differences in the circumstances under which different behavior occurred, differences in time, differences in the behavior's moods, or to some eccentricity in the behavior.

We turn now to responses to the questionnaire that followed the one-paragraph communication. Our analysis centers on the 25 items in the questionnaire which, control experiments showed, differentiated significantly between subjects who received only the extrovertive portion of the communication and those who received only the introvertive portion. These 25 items, in the order in which they occurred in the questionnaire, were the following: a task which involved the writing of a paragraph to convey the subject's impression of Jim; the writing of adjectives which the subject thought applicable to Jim; questions about whether the subject liked Jim and thought Jim was likeable; descriptions of eight situations in each of which the subject's task was to predict Jim's behavior; questions about Jim's body build, mode of walking, and rate of speech; questions asking what Jim thought of himself and boys and girls of his own age; multiple-choice questions in which the subject rated Jim in terms of dichotomous characteristics, for example, as friendly, unfriendly, more friendly than unfriendly, or more unfriendly than friendly; and, finally, three tasks in which sentences were to be completed in terms of the subjects' recall of what he had read in the communication.

1. *None and Other Responses*

Relatively infrequent were responses to the questionnaire that were scored as *None* or *Other*. The mean percentage of various kinds of responses to the total set of 25 items were as follows in Groups 1 through 5, respectively (Table 1).

TABLE 1

	1	2	3	4	5
% <i>None</i> :	3,	9,	2,	8,	5
% <i>Other</i> :	8,	2,	2,	4,	3
% <i>E</i> :	43,	42,	43,	45,	53
% <i>I</i> :	46,	47,	53,	43,	39
% <i>E</i> + % <i>I</i> :	89,	89,	96,	88,	92

It is seen that responses scored as *E* or as *I* together accounted for about nine-tenths of the response opportunities in each group.

2. *Mean Effects*

The indices of primacy-recency were applied to the mean percentages of responses made to the total set of 25 items under each experimental treatment, with the results shown in Table 2. It will be seen that all indices in Table 2 are positive and hence indicative of primacy effect.

Consider the results presented in Table 2. Index 1 shows a progressive decrease in primacy effects from Group 1 to Group 5, which is fully in accord with expectations. A general decreasing trend in primacy is also revealed by both Index 2 and the Mean Index except for an interchange of the rôles of Groups 2 and 3; thus, these results accord with all expectations except Expectation *d*. Each index points to the least primacy effect in Group 5 where the subjects previously received the eight paragraphs similar in content to components of the one-paragraph communication and were given the additional information that the eight paragraphs all referred to one person.

3. *Individual Test Items*

For each experimental treatment, the various indices of primacy-recency were applied to the responses to each of the 25 test items in order to determine the percentage of these items that showed primacy effects as well as the percentage of these items that showed recency effects. The results are presented in Table 3. For each group, and for each index, when the percentage of test items showing primacy effect is added to the percentage of test items showing recency effect and the sum is then subtracted from 100 per cent, there is obtained the percentage of test items which were neutral, in the sense that they pointed to neither recency or primacy. In other words, an item was neutral, as gauged by a particular index, if the index yielded zero for this item rather than either a positive or a negative number.

Table 3 shows that the results with regard to primacy effect are in accordance with expectations as gauged by each index. Thus, from Groups 1 through 5 the percentages of test items that show primacy effects decrease as gauged by Index 1; decrease monotonically as gauged by Index 2; decrease, except for a (not unexpected) interchange in the rôles of Groups 3 and 4, as gauged by the Mean Index. From Groups 1 through 5 the percentages of test items that show recency increase monotonically as gauged by two out of three indices. Consistently, as gauged by each index, of all the groups it is Group 5 which shows the smallest percentage of test items indicative of primacy effect and the largest percentage of test items indicative of recency. Yet, for Group 5, as for each of the groups, the percentage of items indicative of primacy effect is greater than the percentage of items indicative of recency

TABLE 2
 PRIMACY-RECENCY EFFECTS FOR GROUPS 1-5 IN TERMS OF MEAN RESPONSES
 (Ten Ss in each of Groups EI and IE under each experimental treatment except standard treatment which had 87 Ss in Group EI, 89 Ss in Group IE.)

Group	Experimental treatment	% E responses		% I responses		Primacy-recency		Mean index
		EI (a)	IE (b)	IE (c)	EI (d)	Index 1 (a)-(b)	Index 2 (c)-(d)	
1.	Standard conditions	52	34	56	36	+18	+20	+19
2.	Different components	48	35	51	42	+13	+9	+11
3.	Different components referred to one person	48	37	60	46	+11	+14	+13
4.	Same components	50	41	48	39	+9	+9	+9
5.	Same components referred to one person	55	52	39	38	+3	+1	+2

TABLE 3
PRIMACY-RECENCY EFFECT FOR GROUPS 1-5 IN TERMS OF PERCENTAGES OF TEST ITEMS

Group	Experimental treatment	% E items (Index 1) showing		% I items (Index 2) showing		% Mean items (Mean index) showing	
		Primacy	Recency	Primacy	Recency	Primacy	Recency
1.	Standard	100	0	96	4	96	0
2.	Different components	76	20	68	32	80	20
3.	Different components referred to one person	68	20	68	20	68	20
4.	Same components	64	24	56	20	76	20
5.	Same components referred to one person	48	32	44	40	52	48

effect; that is, primacy predominated over recency. In short, prior experiences with the eight paragraphs reduced primacy effects below the level found in Group 1 but did not reduce it to the point where recency prevailed over primacy.

4. *Realm of Influence of Various Factors*

Table 4 presents the Mean Index for each of the 25 tasks. Reading the rows of Table 4 we can conclude that the various experimental treatments tended to have differential influences on any given task. Reading the columns

TABLE 4
MEAN INDEX OF PRIMACY-RECENCY FOR VARIOUS EXPERIMENTAL TREATMENTS

Experimental treatment	Group 1 standard	Group 2 different components	Group 3 different components referred to one person	Group 4 same components	Group 5 same components referred to one person
Task					
Written impression	38	38	30	15	25
Adjectives	24	22	15	9	13
Do you like Jim?	18	15	35	5	-5
Is Jim likeable?	5	20	0	25	5
Party invitation	15	17	-30	5	-5
Met Harry's friends	8	15	-30	-10	-30
Employment choice	27	35	20	0	-5
Medical school party	11	-5	30	50	-10
Discussion idea	20	15	20	5	10
Science club	17	-30	-50	15	-20
Lecturer	10	6	0	25	-45
Barber shop	20	-10	20	40	-45
Body build	0	11	55	2	15
Manner of walk	14	-37	25	30	20
Rate of speech	12	-20	45	5	15
Thinks of himself	28	30	10	31	-5
Thinks of girls	32	30	0	13	35
Thinks of boys	25	5	-20	-30	20
Friendly-unfriendly	20	10	20	-20	5
Forward-shy	22	1	35	10	-5
Social-unsocial	25	31	20	-25	10
Aggressive-passive	19	10	20	5	-15
Sentence <i>re</i> store	12	20	45	25	45
Sentence <i>re</i> students	15	25	-30	25	-15
Sentence <i>re</i> girl	38	30	40	-30	35

of Table 4 we can conclude that a given experimental treatment exerted differential influences on the various tasks. Moreover, there were wide inter-task and intergroup differences in the extent and realm of influence. For example, responses to the question, "Is Jim likeable?" showed less primacy effect in Group 3 than under the standard conditions of Group 1, but the same primacy effect in Group 5 as in Group 1, and even more primacy effects in Groups 2 and 4 than in Group 1. To take another example, for the last

task (sentence to be completed about girl) Group 3 showed more primacy effect than Group 1, while Groups 2 and 5 showed less primacy effect than Group 1, but still the Mean Index was + 30 or more for each of these groups while for Group 4 the Mean Index was - 30.

Another way of studying the realm of influence of various experimental treatments is to see what types of tasks in the questionnaire they influenced to the extent of yielding recency effects. For heuristic purposes we may think of the questionnaire about Jim as consisting of the following types of tasks: the written impression, that is, the first task, in which the subject had to write a paragraph to convey his impression; the listing of adjectives; questions pertaining to whether Jim was liked or likeable; prediction tasks; body build; expressive movements, that is, manner of walking and rate of speech; questions pertaining to what Jim thinks of himself and others; the rating tasks; and, finally, the sentence-completion tasks.

Using Table 4, we find that the kinds of tasks for which negative numbers, indicative of recency effects, were obtained increased in variety from Groups 1 through Group 5. Thus, in Group 1 no task showed recency effect; in Group 2 two kinds of tasks showed recency effects (some of the predictions tasks and tasks pertaining to expressive behavior); in Group 3 three kinds of tasks showed some recency effects (some of the prediction tasks, the question what Jim thinks of boys, and one of the sentence-completion tasks); in Group 4 four kinds of tasks showed some recency effects (some of the prediction tasks, the question what Jim thinks of boys, one of the rating tasks, and one of the sentence-completion tasks); finally, in Group 5, five types of tasks showed some recency effects (the question whether the subject likes Jim, seven out of the eight prediction tasks, the question what Jim thinks of himself, some of the rating tasks, and one of the sentence-completion tasks). To the extent that the different types of tasks tap different aspects of the impression of Jim, these findings suggest that the experimental treatments used in Groups 1 through 5 had an increasingly broader realm of influence in terms of the aspects of the impression in which they could weaken primacy effect to the extent of yielding recency effect, as gauged by the Mean Index. A similar conclusion could have been drawn if Index 1 or Index 2 had been employed.

It may be noted that the only type of task which yielded some recency effect in each of Groups 2 through 5 was the prediction-type of task. Of the total of 27 negative numbers in Table 4, 14 or 52 per cent occurred among the prediction tasks. The Mean Index (and also each of Indices 1 and 2) yielded relatively more negative numbers, on the average, for the prediction tasks than for any other type of task. Thus, if Groups 2 through 5 are

considered as a unit, then, on the average, the Mean Index yielded negative numbers for 44 per cent of the prediction tasks, for 25 per cent of the tasks pertaining to expressive behavior, the tasks pertaining to what Jim thinks of himself and others, the rating tasks, and the sentence-completion tasks, and for 13 per cent of the tasks pertaining to whether Jim is liked or likeable. In the remaining types of tasks (written impression, listing of adjectives, body build) the Mean Index never yielded a negative number. In particular, the first and second task of the questionnaire (written impression, listing of adjectives) consistently yielded positive numbers, indicative of primacy effect, in each of Groups 1 through 5. In short, different tasks—and, possibly, different aspects of the impression—varied in the extent to which they were influenced by the factors that were introduced to weaken primacy effect.

5. *Comparison with Other Experimental Attempts to Reduce Primacy*

Elsewhere (1) we have described three experimental attempts to weaken primacy effect: (a) a warning not to develop primacy effect issued to the subjects prior to the one-paragraph communication; (b) such a warning issued between the introvertive and extrovertive portions of the communication; (c) simple number tasks, instead of the warning, given between the introvertive and extrovertive portions of the communication. It was found that Procedures (a), (b), and (c), when used with Montreal high school students, were increasingly effective in weakening primacy effect (as had been predicted on the basis of experiments dealing with volume-measuring problems). The results, in terms of the indices of primacy-recency, are summarized in Table 5 to allow comparison with those obtained for the present Group 5.

It is seen from Table 5 that when we used either an intervening warning against primacy effect or intervening number tasks, recency predominated over primacy whereas when a prior warning against primacy effect was used, primacy had a very slight edge over recency, with these trends holding for each index. The numbers yielded by the various indices when a prior warning was issued, are strikingly similar to those yielded by the corresponding indices for our present Group 5. It will be recalled that primacy effects were more effectively reduced in Group 5 than in any other of the groups of the present study. Hence it may be concluded that, of all the procedures described herein, those which were most effective in weakening primacy without leading to a predominance of recency, were the procedures used in the present Group 5 and the issuing of a prior warning against primacy effect. Otherwise expressed, these two procedures were most effective in minimizing the totality of primacy and recency effects. Note that both these procedures involved an experimen-

TABLE 5
COMPARISON OF RESULTS OF PRESENT GROUP 5 WITH OTHER GROUPS RECEIVING VARIOUS EXPERIMENTAL TREATMENTS

Experimental treatment	Average % of E and I responses				Primacy-recency mean effects		% E items showing		Primacy-recency % of test items		Mean % items showing	
	% E in Group		% I in Group		Index 1	Index 2	Pri-macy	Re-cency	Pri-macy	Re-cency	Pri-macy	Re-cency
	EI	IE	IE	EI								
Same components referred to one person	55	52	39	38	+3	+1	48	32	44	40	52	48
Advance warning	37	35	54	49	+2	+5	44	32	48	40	56	40
Interpolated warning	38	43	40	47	-5	-7	20	56	32	52	32	60
Interpolated number tasks	32	48	34	45	-16	-11	16	76	24	64	20	68

tally-provided experience prior to the one-paragraph communication. On the other hand, the procedures which most effectively strengthened recency effects were experimentally-provided experiences which intervened between the introvertive and extrovertive portions of the communication, experiences which disrupted the unity of the communication.

It is perhaps noteworthy that although the present Group 5 and the group of the previous study that had the prior warning showed very similar results in terms of the various indices of primacy-recency, their results in terms of the percentages of *E* and *I* responses differed considerably. For example, the *EI* group of the present Group 5 showed, on the average, 55 per cent *E* responses and 38 per cent *I* responses to the 25 tasks, whereas the *EI* group with the prior warning showed 37 per cent *E* responses and 49 per cent *I* responses to these tasks, and the *IE* group of the present Group 5 showed 52 per cent *E* and 39 per cent *I* responses as compared to 35 per cent *E* and 54 per cent *I* responses for the *IE* group with the prior warning. Even more striking differences occurred for *E* and *I* responses to certain of the tasks. Moreover, the pattern of primacy and recency effects for various types of tasks (cf. Table 4) proved to be quite different for Group 5 than for the group with the prior warning. In short, similarity in numbers yielded by indices of primacy-recency may cover considerable differences in other aspects of the results.

D. SUMMARY AND CONCLUSIONS

The present report described various experimental attempts to weaken primacy effects with reference to a written, one-paragraph communication, where primacy effects reflect the greater influence of the lead part of the communication as compared to the last part. The communication described the behavior of an individual, with one part describing a rather introvertive behavioral pattern and the other part a rather extrovertive behavioral pattern. We wondered whether the behavioral pattern that was read first or last would predominate in the subject's response to a detailed questionnaire designed to tap various aspects of his impression of the person about whom he had read. Subjects were Montreal college subjects. Prior to the one-paragraph communication some of the subjects received eight components from this communication, with the totality of the components comprising the entire communication, with each component presented as a separate paragraph, and with the order being such that the distance between conflicting information was minimized; that is, two components that presented conflicting information were adjacent rather than separated by other information as in the one-paragraph communication. Other subjects received, prior to the

one-paragraph communication, eight paragraphs (arranged in the same format and order as already described) but taken from another communication, one portion of which described an introverted and the other portion an extroverted behavioral pattern; thus, the eight paragraphs here were not identical in content with any parts of the subsequent communication. It was found that primacy effects were more effectively reduced when the eight paragraphs were identical in content with parts of the subsequent communication than when they were not identical. Moreover, for each set of eight paragraphs, primacy effects were even further reduced when the experimenter told the subject, just prior to the one-paragraph communication, that all eight paragraphs referred to one person and insisted that the subject explain how one person could have shown all these actions. Each of these attempts to reduce primacy effects succeeded in lowering primacy below the level which prevailed when subjects received the one-paragraph communication without any of these prior experiences. The trends of results, including the relative effectiveness of various kinds of previous experiences, were generally in line with expectations derived from the hypothesis that primacy effects are in the nature of Einstellung effects, akin to the Einstellung effects which have been known to develop in a series of volume-measuring problems.

Analysis of the results for 25 tasks in the questionnaire showed that some reflected recency (that is, the greater influence of the last part of the communication), while others reflected primacy effects. If different types of tasks are considered to tap different aspects of the impression, then it may be concluded that: a given experimental treatment exerted differential effects on different aspects of the impression; a given aspect of the impression was affected differently by various experimental treatments, with the extent and pattern of influence varying widely among the different aspects; and finally, that some aspects of the impression resisted efforts to minimize primacy effects more than did others and that some lent themselves more readily to recency effects than did others.

Most effective of the present experimental treatments, both in weakening primacy and in minimizing the totality of primacy and recency effects, was the procedure wherein eight paragraphs identical to parts of the subsequent one-paragraph communication had been used, coupled with the instruction that all eight referred to one person and the experimenter's insistence that the subject explain how one person could have shown all these actions. The picture with regard to overall primacy-recency results yielded by this procedure was strikingly similar to that which had been found in a previous study wherein another kind of prior experience had been provided: a warning against the development of primacy effects issued just before the one-para-

graph communication. Although other aspects of the results differed for the two experiments, common to both was the finding that, on the whole, primacy effects were just slightly more pronounced than recency effects. In contrast, in previous studies, wherein in place of prior experiences, tasks had been used that intervened between the introvertive and extrovertive portions of the communication, it was found that recency effects tended to predominate over primacy effects.

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BROKEN HOMES BY AGE OF DELINQUENT CHILDREN*

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A. GENERAL CONSIDERATIONS

The significance of family life and the home in character and personality formation in our society is a matter of general agreement (6). A variety of studies do in fact show that disorders of a psychological and social kind may be related to a break in the social matrix of husband-wife-child (1, 9, 15, 27, 33, 37, 53).

The nature of the family fragmentation and the circumstances surrounding the break are quite important in understanding the consequences to the child. Desertion and divorce are clearly different than the decedence of a parent, and "parentlessness" because of illegitimacy is something else again.

The age at which these untoward events take place is also crucial for the child. Obviously the loss of a parent does not occur under the same set of circumstances and at the same time for all children, even in the same family. Because of this, and the fact that children have different experiences, sensitivities, and capabilities, it is no wonder that all children in the same broken-home family do not become disturbed or delinquent. In the same context it should be recognized that all broken homes are not necessarily poor ones for the child, and all intact homes are not good ones merely because of the presence of two parents. Indeed, there are some who hold that it might be better for children if families in bitter conflict were socially dissolved.

After the shock of the family break has gone and the time of stress has passed, gradually readjustment occurs among children (10, 23, 41, 46, 53). The age and the maturity of the child, and the closeness of the parental attachment, as well as the suddenness of the impact have a bearing on the outcome. In some cases the effect may be delayed until adolescence when the particular child may have greater need for parental images and guidance (13).

From their special point of view, psychiatrists consider the first years of

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¹ If resources were available to undertake a large scale project which would follow a group of newborn children throughout a lifetime, a study of the consequences of family structure and the like, in all manner of relationships, could be made, such as is done in other fields of investigation (40). It is difficult to obtain a satisfactory or complete picture of the effect of family disorganization on children from fragmental studies such as this one. These piecemeal approaches can only narrowly focus the range of behavior which interests us and only limitedly sharpen our understanding.

infancy as highly crucial ones, at which time, they hold, the deprivation of mothering (especially) may cause serious and lasting damage to the child's personality. At ages 3 to 5 the effect may still be serious, diminishing thereafter; although, up to age 16 the child may remain susceptible to the effects of such a loss (3, 4, 9, 14, 16, 20, 25). Agencies which place children in foster homes or for adoption are in practice guided by the principle of very early child placement (2, 24).

While the emotional and other deprivations resulting from the loss of a parent are important, and while the first seven years of childhood (the "plastic" ages) are highly significant, other factors should not be ignored. In a broad sense, infant care may not be the sole or even singularly determining factor in later careers. There are some who hold that there is no fixity in human growth and that for all normal individuals the potentiality of change is paramount (5, 8, 38, 39). This view holds rather for a concept of resiliency and adaptation. It should be appreciated also that in the community there are many agencies ready to assist the individual in his socialization and acculturation—where the family fails him.

B. GENERAL POPULATION INFORMATION

Detailed data about family circumstances of children in this country are notoriously deficient. Miscellaneous information is available, however, which enables us to establish a few useful points of reference for this study of delinquency.

1. Taken as a whole, it is likely that more marriages are broken by desertion and divorce than by death during the years of childbearing (19, 31).
2. Divorces (including those with no children) currently exceed deaths as the reason for broken homes in the first 12 years or so of marriage (19, 31).
3. Orphanhood before the age of 18 has diminished; and, orphaned children are older children—more so than a generation ago (49, 50) (see Table 1).

TABLE 1
ORPHANHOOD BEFORE THE AGE OF 18 IN THE UNITED STATES

Age group	1920	1953	1920	1953
	Age distribution per cent	Age distribution per cent	Per cent of all children in age group orphaned	Per cent of all children in age group orphaned
Total (Under 18)	100.0	100.0	16.3	5.4
0-4	9.6	6.5	—	1.0
5-9	25.0	21.6	—	3.9
10-14	38.4	38.8	—	8.7
15-17	27.0	33.1	—	14.2

4. Children from socially broken homes nowadays probably outnumber the orphaned children. They are younger than the orphaned group and they are also much younger than the child population in general.

The youthfulness of children in divorce cases is shown by the results of a Philadelphia study relating to the period 1937-1950 (21). About 12 per cent of the offspring in the *primary* marriage group (both parties married once only) were over the age of 18 at the time of separation, but the age distribution of those under 18 years was as follows: Under 3 years, 22.5 per cent; 3 to 6 years, 31.5 per cent; 7 to 9 years, 16.9 per cent; 10 to 14 years, 19.6 per cent; 15 to 17 years, 9.5 per cent. In the same age groupings orphans under 18 years of age in the United States in 1953 showed the following distribution: 2.5, 10.8, 14.8, 38.8, and 33.1 per cent, respectively (49). Unpublished data on desertion and nonsupport cases in Philadelphia disclosed the ages of the offspring of white *primary* marriages to be: Under 8 years, 61.7 per cent; 8 to 14 years, 19.5 per cent; 15 to 17 years, 4.8 per cent; older and out-of-wedlock children, 14.0 per cent.

It is clear from the foregoing that nearly half of the children affected by divorce of their parents, and well over half of those affected by desertion (nonsupport) are under 7 years of age (29, 30, 32, 33, 34, 51, 52).

5. With each succeeding level of age we find increasingly larger proportions of children from broken homes as a whole. This is particularly true for the orphaned group, and moderately so beyond the age of 10 years for the socially broken class of homes.

C. THE AGE RELATIONSHIP IN CRIMINAL GROUPS

In one study made of probation cases in Cincinnati, Ohio, in 1930 the "lack of proper home training during character forming years" and the broken home were found to be the most important "causal" factors in later delinquency of children. Harmful associates and a bad environment followed closely upon these factors (36). It has also been proposed that "a large share of the responsibility for [juvenile] recidivism can be traced to the formative period of personality" (11, p. 561), that "most criminal careers have their inception very early in life" (26, p. 534), and "the longer the homes remain broken the greater the number of delinquents" (28, pp. 375-78). Unfortunately, adequate information on these and other points is lacking.

1. Prisoners and Parolees

It is rather well known that a high proportion of broken homes is found among prisoners and felons in their youth. In addition, as shown by a Census tabulation of prisoners in 1923, there was a cumulative rise in the proportion

of broken homes by age. According to this report, "common experience suggests that these prisoners were as a rule separated from their parents at decidedly earlier ages than is the case with the population in general"—although comparable population data were not available to support the remark (47, p. 30).

Parolees in New York State in 1952 whose homes were broken before the age of 16 (including illegitimates) showed the break in their family to have occurred as follows: Under age 6, 58.5 per cent; under age 9, 72.8 per cent; under age 12, 85.6 per cent (35, p. 192).

2. Juvenile Delinquents

a. The Gluecks' studies. The investigations of the Gluecks produced pertinent information on broken homes by the age of the child. Not only was the proportion of broken homes found to be higher among the delinquents than among the controls (50 per cent versus 29 per cent), the break in the home also occurred sooner for the delinquent children (17, pp. 76-77, and 18, p. 122) (see Table 2).

TABLE 2
AGE AT BREAK OR PARENTAL WITHDRAWAL: BOSTON BOYS, UNDER 16 YEARS

Age group	Delinquents clinic cases 1919 c.	Control study	
		delinquents	controls
Total			1939
Under 5	100.0		
5-9	40.3	100.0	100.0
10-14	35.0	56.3	46.7
15+	22.4	28.1	31.0
	2.3	14.6	20.5
		1.0	1.8

The Gluecks also found an interval of time between the first "misbehavior" and the child's first arrest or appearance in court. The mean age of the delinquents in the control study at their first misbehavior was 8.4 years, and at their first court appearance 12.4 years, a difference of 4 years (17, p. 97; 18, pp. 27, 293). As it has so often been stated, not all children who commit delinquencies are "brought to book," and as the Glueck study demonstrates at the time of a court appearance many children of a specified age undoubtedly have a broken-home history of several years and a preceding series of offenses.

b. The Shaw and McKay study. Virtually the only reference regularly cited in the literature which discusses the relationship of age to delinquency and broken homes is the Shaw and McKay study of 1,675 delinquent boys made in Chicago in 1929. Numerous defects exist in the design of the

broken home aspect of their investigation. It should be noted that (a) the control group probably contained delinquents in it to an unknown degree; (b) there was a selectivity in police referrals of children to court (no doubt by age, too), with many cases being adjusted by the police informally; and (c) the delinquent group included more serious cases than prevailed in the community as a whole, and recidivists as well as first offenders. The number of children at ages 10 and 11 in the delinquent group is far below what one would expect in a more generally drawn sample of delinquents, and court authority practically ceased at age 16 in Chicago as regards "delinquents" (42, 43; 11, 12, 33, 44, 45).

All in all, considering the nature of the Shaw-McKay data, the results and the broken home *ratios* by age must be viewed with great reservations. The irregularity of the broken home *rates* by age is also worth noticing.

c. *Institutionalized delinquents.* The Bureau of the Census published data on juvenile delinquents in public institutions in 1933 (48). The proportion of broken homes at the time of institutional commitment is undoubtedly higher than that which prevails in the delinquent group as a whole, as a recent study has demonstrated (33). Moreover, since recidivists are included, the data do not refer to age at the time of first arrest (much less the time of first infraction of the law). Here, too, irregularities appear in the broken home proportions, age by age, which suggest further caution to be taken in their use.

These figures on institutionalized delinquents, subclassified by sex and color, do show a pattern similar to the Shaw-McKay findings: that is, the proportion of broken homes *does not rise* with the age of the child!

d. *Philadelphia data.* A set of data on broken homes relating to children who were arrested and charged with committing delinquent acts in Philadelphia from 1949 to 1954, numbering 24,811 *first* offenders, was arranged according to age of child and the type of family disruption at the time of the first court contact (see Table 3). Here, too, because of the nature of the information and the irregularities in the age-to-age percentages, one must not put too close a credence in the figures for specific ages. No doubt some of this could be due to misreporting.

One thing stands out quite clearly. There is a fair degree of uniformity in the proportion of children with broken homes *whatever the age* of first offense for which the child was arrested and given a hearing. The expectation is that the proportion of the child population having broken homes would rise with increasing age. Hence, if the broken home were merely a constant factor in the delinquency syndrome, the delinquents should also

TABLE 3
JUVENILE DELINQUENTS IN PHILADELPHIA: FIRST OFFENDERS, 1949-1954;
TYPE OF BROKEN HOME BY AGE OF CHILD, PER CENT OF HOMES BROKEN

Type of broken home	Total	Un. 9	9	10	11	Age in years						17
						12	13	14	15	16		
White Boys												
All types	27.7	27.9	26.8	26.3	24.7	23.6	29.0	30.9	30.9	27.3	25.4	25.4
Orphaned	11.1	5.3	5.7	8.2	8.2	7.5	10.0	12.3	12.3	12.7	14.3	14.3
Socially broken	13.9	17.9	17.9	13.9	14.5	14.4	16.7	15.9	15.9	12.2	8.1	8.1
Living apart	8.6	12.7	10.8	8.3	9.7	9.2	11.0	10.7	8.5	7.5	4.4	4.4
Divorced	5.3	5.2	7.1	5.6	4.8	5.2	5.7	5.2	6.7	4.7	3.7	3.7
Unmarried	1.6	3.9	2.7	3.1	1.0	.9	1.4	2.2	1.3	1.5	.8	.8
Other	1.1	.8	.5	1.1	1.0	.8	.9	.5	1.2	.9	2.2	2.2
Negro Boys												
All types	53.0	50.2	48.8	51.7	51.0	55.0	55.1	55.2	57.1	50.2	50.2	50.2
Orphaned	16.2	8.4	9.0	12.2	12.9	14.9	15.9	17.7	19.5	18.2	19.7	19.7
Socially broken	24.9	26.3	23.4	28.5	23.6	27.8	27.9	25.2	25.7	21.2	21.7	21.7
Living apart	22.5	23.6	22.4	27.1	21.7	25.2	25.9	22.2	23.1	18.4	19.6	19.6
Divorced	2.4	2.7	1.0	1.4	1.9	2.6	2.0	3.0	2.6	2.8	2.1	2.1
Unmarried	10.7	13.1	15.1	10.2	13.3	11.0	10.1	11.6	10.7	9.9	7.4	7.4
Other	1.1	2.4	1.3	.8	1.2	1.3	1.2	.7	1.2	.9	1.4	1.4
White Girls												
All types	52.0			54.5	61.8	55.2	52.9	52.4	51.8	47.8	54.4	54.4
Orphaned	19.0			10.0	14.7	16.2	14.7	19.3	21.5	20.5	20.4	20.4
Socially broken	27.1			32.7	32.4	30.4	31.1	27.8	24.9	23.2	28.1	28.1
Living apart	16.4			20.0	17.7	17.1	20.4	16.6	14.9	14.4	16.4	16.4
Divorced	10.7			12.7	14.7	13.3	10.7	11.2	10.0	8.8	11.7	11.7
Unmarried	4.1			10.0	11.8	8.6	6.2	4.6	3.0	1.9	2.2	2.2
Other	1.8			1.8	2.99	.7	2.4	2.2	3.7	3.7
Negro Girls												
All types	73.2			73.1	77.1	70.5	72.4	75.6	71.1	73.3	77.0	77.0
Orphaned	20.0			16.7	13.5	13.8	16.0	17.2	22.3	25.3	26.6	26.6
Socially broken	31.8			32.2	37.3	33.9	31.3	32.3	30.8	32.1	30.9	30.9
Living apart	29.3			30.4	35.6	30.8	28.4	29.3	28.0	29.9	30.1	30.1
Divorced	2.5			1.8	1.7	3.1	2.9	3.0	2.8	2.2	.8	.8
Unmarried	20.3			23.3	24.6	21.9	24.3	25.0	17.2	14.5	17.1	17.1
Other	1.1			.9	1.7	.9	.8	1.1	.8	1.4	2.4	2.4

All percentages are based upon figures in excess of 100 cases, except white girls at age 11 (35 cases).

† These percentages for age 11 and under.

show an increasing degree of broken homes with advancing age. Such is not the case.

The immediate thought is that as the child becomes older the broken home has less of an impact upon him. In time he also adjusts to this circumstance. And, other agencies and social forces, plus a certain maturity, may enable him to make the necessary adjustment without becoming embroiled in misconduct.

Whatever the explanation, it must be recognized from these data on first offenders that the factor of the broken home in child delinquency has diminishing importance with advancing years of age. It is unlikely that the number of broken home children is sufficiently reduced with age by deduction therefrom of children who have already been counted as first offenders. There might be some bias in official apprehensions and actions regarding very young offenders lacking parental supervision (the broken home especially), but this hardly has significance in the central ages of delinquency.

At ages 16 and 17 the percentages of broken homes seem to drop somewhat for boys, but not for girls. If these figures are true, some interesting explanations come to mind. However, considering the different administrative handling of the older boys' case records in this period, the variation in the pattern for boys cannot be offered with assurance at these ages, and it shall have to be checked in future studies. Even at ages 16 and 17 the broken home relationship in delinquency is still apparent. It could be argued that delinquent children may come largely from lower socio-economic levels where family disruption of all kinds is more prevalent, and that this could create the seeming relationship. This would be saying, however, that delinquents come from a Philadelphia population composite in which at ages 16-17 one-fourth of the white children and one-half of the Negro children have broken homes—which seems unlikely.

If we examine the orphaned group separately we do find this group to follow the general pattern of expectancy with some variations. With advancing age a larger proportion of children in each sex and color category show homes broken by death. On the other hand, at the younger ages the great share of broken homes of first offenders is attributable to unmarried parentage or social disruption of the family.

Orphanhood once accounted for a much larger proportion of broken homes among delinquent children. In recent years mortality has diminished as a cause of family break-up and the establishment of Social Security benefits has removed a large part of the economic deprivation and related consequences of orphanhood. The child of the socially disrupted home, however, is not only younger, he is also more disadvantaged in sundry ways.

The child of the divorced or deserted parent and the illegitimate child have a whole set of different circumstances with which to contend. For him or her, especially, we might expect that in the "tender years" all of the necessary guidance, care, and attention may not be available. From the outset, the socially *disordered* family may hinder the acceptance by the child of community norms and values. But, with the older child, there would be less of a direct dependence on his "family." Having a broader social awareness the adolescent can understand and respond more rationally. With the passage of time, if family disruption occurred earlier, the after-effects of this disorganization might also be expected to lose its lacerating thrust. This could be one explanation for the lessening effect of the socially broken home factor in the delinquency picture with older children.

The Philadelphia data indicate that illegitimate parentage and socially broken homes are considerably more common among *female* offenders (both white and Negro) than among the boys. When one realizes, in connection with this result, that there are about as many boys as there are girls who are born out of wedlock, then illegitimate parentage among girl offenders (especially the younger girls) looms as a rather large factor in female delinquency. In the same context, socially broken homes among girls (especially younger girls) seem to play an important part in their juvenile difficulties with the law.

"Divorce" as an element in the picture is probably not as carefully reported as one would wish, in order to make a precise analysis. White children show a greater degree of this kind of family dissolution. As between boys and girls, there is not much difference here in the Negro group; but, among the whites, the girls show a higher proportion of divorced parents (once again, in the younger ages especially).

D. CONCLUSION

The age of the child at the time of his family's disruption and the nature of the break tend to define the way he is affected by the calamity to him.

On the whole orphanhood is occurring less often and later in a child's lifetime. Social disruption of the family, on the other hand, has grown in scope and takes place particularly during the child's younger years. The homes of many delinquent children are broken long before they reach the official ages of delinquency. In fact, over half of all children under 18 years of age whose families have been socially disrupted are less than 7 years of age and about 70 per cent of such children are under the age of 10. The delinquencies of children occur in the ages following, 10 to 17 years—where about 90 per cent of the offenders are found.

It is also known that in the predelinquent years a very large proportion of delinquent children commit acts of misconduct. Hence, it can be seen, the official delinquencies which start to mount at age 10 are to some extent a consequence of the earlier years of deprivation and maldirection (17, p. 95; 18, pp. 20, 293; 20).

The high proportion of broken homes of all types among *young* children (especially girls) is rather convincing evidence of the undesirable consequences to children of the social or fortuitous misadventures of their parents.

The other major result of this study is in agreement with previous findings: the broken home factor varies in importance and in type with advancing age of child. The overall relationship in delinquency diminishes with age. No critical age is discernible. As regards official delinquency of first offenders the importance of family dissolution is still in evidence but not as strongly as in the younger years.

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THE "WHO AM I" TEST*

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A. INTRODUCTION

Despite the importance of the self-concept in clinical psychology, there have been few techniques available for direct, simple measurement of this variable. This paper describes a new method of measuring the self, developed from social-psychological theory (3), that the writer has found valuable in a clinical setting as part of the total test battery used in psychodiagnosis.

Theoretically, we accept the hypothesis that "human behavior is organized and directed by the individual's attitudes towards himself" (3). In the theorizing of sociologists, personality theorists, social psychologists, and psychiatrists, the self is crucial as a conceptual tool.

The Who Am I test attempts to measure the self as the individual respondent perceives himself—the phenomenal self. However, it also is influenced by how the respondent wishes others to perceive him, since responses to the test are given in a social setting.

B. ADMINISTRATION OF THE TEST

A blank piece of paper numbered from 1-20 is given the respondent in either an individual or group setting. About 12 minutes is ample for administration. The following instructions are given verbally or mimeographed at the top of each page (3)

There are 20 numbered blanks on the page below. Please write 20 answers to the simple question "Who Am I" in the blanks.

Just give 20 different answers to this question. Answer as if you were giving the answers to yourself, not to somebody else. Write the answers in the order that they occur to you. Don't worry about logic or importance. Go along fairly fast for time is limited.

C. PREVIOUS RESEARCH

Kuhn and McParten (3) describe consensual and sub-consensual responses to this test. Consensual refers to behavior, roles, or characteristics that are easily objectively validated such as "husband, doctor, six feet tall, American."

* Received in the Editorial Office on May 23, 1958.

The sub-consensual responses are more personal and isosyncratic, such as "honest, intelligent, friendly," and are covert.

Festinger (2) finds the technique "novel and interesting."

Persons list consensual statements before they list any sub-consensual statements and, after having listed one subconsensual statement, practically never list any more consensual statements Analyzed as a Guttman scale it yields a reproducibility of over .90 The finding that the responses order themselves as they do is provocative and worth noting (2).

Kuhn and McParten (3) suggest its clinical use and indicate, on the basis of their preliminary work, that possibly "those with few if any *consensual* statements to make have symptoms of emotional disturbance." Other suggestions for clinical use may be found in (1) where a similar technique is presented.

D. CLINICAL INTERPRETATION AND ANALYSIS

The writer has found certain scorable features valuable as well as the intuitive, qualitative interpretations now used with most projective instruments. Quantitatively, the number of responses is considered first. Some patients give few if any responses, others are reluctant to stop at 20. Then the number of consensual and sub-consensual responses is considered as well as the sequence of response type and the consistency of remaining at either level or mixing the type of response.

An analysis is then made of the content in terms of the salience or absence of certain features: (a) type and number of kinship, occupational and group membership roles; (b) physical characteristics and evaluation made of them; (c) traits and attitudes (with especial note of positive and negative self-references); (d) goals, aspiration levels; (e) conflicts, bizarre ideas, delusions, idiosyncracies.

Qualitatively, the reader may find the following protocols of interest:

Schizophrenia, paranoid type

I am God, the Father Almighty,
Maker of heaven and earth.

I need to get out of these
god damned straps.

What the hell is going on here?

I am the Divine Redeemer.

Schizophrenic, chronic undifferentiated type

My name is _____.

I have no real estate.

There is an ardent desire to recover from illness.

I am grateful to receive letters and messages.

I am most interested in securing employment . . .

Perhaps a politician could be persuaded to encourage interest and financial aid to the ill. I intend to make a special investigation concerning a certain dread disease . . .

A former friend informed me, that a long since dead mutual acquaintance had had this disease.

I would suggest that only visitors, requested by the patient, be allowed to visit said patient.

Chronic, agitated depression

Idiot, moron, ingrate, infidel, ex-wife, ex-mother, ex-member of society, nothing, corpse, moral wreck, mental wreck, physical wreck, ex-daughter, ex-sister, ex-neighbor, no-good, no-good, no-good, scared woman, scared woman.

Sociopathic personality reaction, alcohol addiction

1. (name), I drink, I'm at Longview, I got web fingers, I weigh 149 lbs., I got brown eyes, brown hair, 8½ shoe.

2. (name) 5'10" tall, blue eyes, brown hair, 140 lbs. I try to be a sociable guy, hard worker.

Schizophrenia, hebephrenic type

Put you pypu yound. pople uni. Put you pyper youndy. that you. that you. What dost that say. What do thy say. Where are you known.

Chronic Brain Syndrome, intracranial infection

I am the lady that have spell and I am the one that ran down the street without any clothes with my bible in my hand. I do not know anything when these spells come on me but my sister told me about all of it . . . will you forgive me, please.

Mental deficiency with psychosis

(name), domestic worker, well educated, have been in a home, learned and trained well at State School, mind my own business, like to be kind to everyone, I had 3 children, like to play all games and sports, don't like to be bossed around, if people want to give me good advice, I accept, never had to be in a hospital before, I'm responsible, know the law by heart, approve of good things not bad ones, liked my home and surroundings, like to help others as well as myself, I pay my income tax, I pay my insurance, I know the valuation of money.

The above cases illustrate the variety of reactions in different patient groups. The instrument appears to be sensitive to the present condition of the respondent and may be valuable in studies that attempt to assess psychological change. Norms for age, sex, minority, and patient groups are relatively easy to secure. The validity of this instrument has a similar defense to that proposed for the *W-A-Y* technique (1).

E. SUMMARY

An approach to the measurement of the self-concept, the "Who Am I Test," is presented. The theoretical rationale, administration, analysis, previous research, and clinical utility of the instrument are described. Case protocols are presented.

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MMPI CODE CONFIGURATIONS AS RELATED TO MEASURES OF INTELLIGENCE AMONG A STATE PRISON POPULATION*

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A. INTRODUCTION

There have been several studies—Brower (1), Winfield (2), Levy, *et al*, (3)—reporting the relationship between measures of intelligence and Minnesota Multiphasic Personality Inventory scores; however, none of these studies utilized profile patterning of configurational code interpretations in their approach. The method of coding *MMPI* profiles developed by Hathaway (4) and extended by Welsh (5) places emphasis on the relative rank of the scale scores within the profile code (the scale with highest *T*-score being ranked first in the code, etc.) and the configurational patterning of the coded scales. By employing code analysis in the study of profile differences appearing between individual cases or groups of cases it is often possible to identify significant "real profile differences" which are not detectable when only *T*-score differences are taken into consideration.

The purpose of this study is to determine if there are any significant changes in *MMPI* profile code configurations of prison inmates with an increase in intelligence as measured by the Revised Beta Examination.

B. METHOD

The valid *MMPI* records on 1079 white male prison inmates committed to the North Carolina State Prison during the calendar years 1955 through 1957 were sorted into groups in accordance with their scores on the Revised Beta Examination (Table 1).

TABLE 1

<i>IQ</i> Classification group*	Beta <i>IQ</i> range	N
Superior	120 - 129	16
Bright normal	110 - 119	127
Average	90 - 109	655
Dull normal	80 - 89	193
Borderline	70 - 79	57
Mental defective	Below 70	31
		Total 1079

* Wechsler's (6) system of *IQ* classification.

* Received in the Editorial Office on May 26, 1958.

The *MMPI* scale means, standard deviations, and coded profiles, as shown in Table 2, were computed for each *IQ* Classification group. This procedure was followed by the computation of contingency coefficients (*C*) to determine

TABLE 2
COMPARISON OF *MMPI* SCALE MEANS AND STANDARD DEVIATIONS OF *IQ*
CLASSIFICATION GROUPS

Group		Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
Mental Defective (N = 31)	Mean	66.7	68.9	62.1	73.9	53.1	62.7	63.5	67.3	60.5	53.5
	SD	13.1	13.4	8.9	9.4	8.7	11.2	10.7	13.9	8.8	8.3
* <i>MMPI</i> Code: 4' 2 81 763 9 - 05											
Borderline (N = 57)	Mean	62.1	68.0	60.8	70.9	51.8	59.0	63.0	63.4	59.7	55.4
	SD	14.7	13.5	10.0	10.9	8.2	9.2	11.2	14.5	9.6	8.1
<i>MMPI</i> Code: 4' 2 87 139 - 605											
Dull Normal (N = 193)	Mean	64.2	66.1	61.2	72.4	53.2	61.5	64.1	64.9	59.6	54.5
	SD	15.7	10.9	11.4	10.3	8.3	12.4	13.8	15.8	11.9	9.0
<i>MMPI</i> Code: 4' 2 817 63 9 - 05											
Average (N = 655)	Mean	59.7	63.1	58.1	71.3	53.7	58.7	59.7	58.2	59.4	53.0
	SD	15.3	12.9	12.7	9.9	9.4	12.1	11.9	14.3	10.9	9.1
<i>MMPI</i> Code: 4' 2 - 1796 83 50											
Bright Normal (N = 127)	Mean	56.9	51.8	59.6	71.5	54.9	56.9	58.8	57.5	62.7	50.8
	SD	11.4	12.2	9.9	9.8	9.9	10.0	11.2	11.8	11.8	9.4
<i>MMPI</i> Code: 4' 9 - 37 816 5 20											
Superior (N = 16)	Mean	52.6	53.9	57.4	66.7	57.4	57.0	55.2	54.6	61.4	45.6
	SD	8.7	8.1	5.8	7.6	7.8	10.2	7.4	9.5	8.4	10.4
<i>MMPI</i> Code: 49 - 356 782 1/0											

* Welsh's system of coding.

the significance of the shift in code rank for each of the diagnostic scales with increase in Beta *IQ*. The shift in code rank of six of the scales was found to be significant beyond the .01 level of confidence. Table 3 presents the mean code rank of the diagnostic scales for each of the *IQ* groups. Those scales whose shift in code rank produced significant *C*'s are denoted by an asterisk.

TABLE 3
MEAN CODE RANKS OF *MMPI* DIAGNOSTIC SCALES—IQ CLASSIFICATION GROUPS

Diagnostic scale title <i>MMPI</i> code designation	Hs* 1	D* 2	Hy* 3	Pd 4	Mf* 5	Pa 6	Pt 7	Sc* 8	Ma* 9	Si 0
Group										
Mental Defective	4	2	7	1	10	6	5	3	8	9
Borderline	5	2	6	1	10	8	4	3	7	9
Dull Normal	4	2	7	1	10	6	5	3	8	9
Average	3	2	8	1	9	6	4	7	5	10
Bright Normal	6	9	3	1	8	7	4	5	2	10
Superior	9	8	3	1	3	5	6	7	2	10

* Indicates those scales whose shift in code rank with increase in intelligence is significant at the .01 level of confidence.

C. RESULTS AND DISCUSSION

Inspection of the data presented in Tables 2 and 3 reveals that there is little change in profile configuration with increase in intelligence below the 110 *IQ* level. However, as intelligence increases beyond the average range there is considerable change in profile patterning. The mood or feeling Scales 1 (Hs), 2 (D), 7 (Pt) along with Scale 8 (Sc) are among the first five ranked scales on the profile codes of the below average *IQ* groups, and with the exception of Scale 8 maintain the same prominence within the average *IQ* group. The relative patterning of these scales among the lower *IQ* groups presents a close conformity to profile patterns usually associated with neuroticism and anxiety. However, with the increase in intelligence above the 109 *IQ* level Scales 1 and 2 are considerably reduced in code rank, and Scales 3 (Hy) and 9 (Ma) move up in rank to join Scale 4 (Pd) as the salient profile features. Scales 3, 4, and 9 are generally known as the character disorder scales, and they are usually prominent in the profiles of cases diagnosed constitutional psychopathic inferior, psychopathic personality, sociopathic personality, primary behavior disorder, etc. At this point it is particularly interesting to note that although there are no statistically significant differences existing between mean Scale 9 *T*-scores, i.e., the scores remaining quite consistent at approximately $T = 60$, when the scale is evaluated in terms of its shift in code rank real configurative differences occur. This appraisal of the rôle played by Scale 9 appears to substantiate the contention that coding may reveal profile configurations which are obscured by graphic or tabular listing of *T*-scores.

Although Scale 4 is the first ranked scale in all the group profiles, it assumes its most clinical significance within the above average *IQ* groups. A Scale 4 score of $T = 65$ or above, when it is a clear spike accompanied

by a low score on the neurotic triad, and a secondary elevation on Scale 9 is usually considered to be indicative of psychopathy. The relatively weak position of Scales 3 and 9, and the relatively "less clearness" of the Scale 4 spike within the lower *IQ* groups would tend to indicate that behavior difficulties in persons with low *IQ*'s are contributable more to factors evolving from their intellectual limitations rather than to psychopathic characteristics.

The shift in code rank of Scale 5 (*Mf*) from the least ranked positions within the lower *IQ* groups to the 3rd ranked position within the Superior Group code is in conformity with the findings of Levy and Winfield that increase in male intelligence is associated with an increase in feminine interest patterns. Further study would be required before one could justify the interpretation that these higher Scale 5 scores are indicative of the existence of latent or overt homosexuality.

The susceptibility to a program of rehabilitation involving psychotherapy appears to be greater among the average and below average *IQ* groups. The work of Gallagher (7) and Kaufmann (8) has shown that generally it is the mood or feeling scales (*Hs*, *D*, *Pt*) which show the greatest change in the direction of health as the result of therapy, while the behavior or character disorder scales (*Hy*, *Pd*, *Ma*) show the least amount of change concomitant with therapy.

D. SUMMARY

The *MMPI* profile of 1079 prison inmates of the North Carolina State Prison were compared for differences in profile code configurations with increase in intelligence as measured by the Revised Beta Examination.

The profile configurations of the above average *IQ* groups were found to be significantly different than the profile patterns of the lower *IQ* groups. The profiles of the two most intelligent groups appeared indicative of behavioral characteristics generally classified under the character disorders. The patterning of the average and below average *IQ* groups were found to be dominated by profile configurations usually associated with neuroticism and anxiety.

The rise of Scale 5 in both *T*-score and profile rank within the Superior Group supported previous findings that intellectually superior persons tend toward greater degrees of feminine interest.

The probability of receiving benefit from psychotherapy appeared greater among the lower *IQ* groups due to the dominance in their group profiles of those scales that have been found more susceptible to change as a result of therapy.

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IMPACT OF FAILURE ON GROUP COHESIVENESS*

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A. THE PROBLEM

The problem of group cohesiveness has been attacked by several research workers. French (4) compared eight organized groups with eight newly created groups and studied the reaction of their members to frustration. Conflicts about ways and means, as well as about goals, in addition to personal rivalries, seemed to be the most disruptive forces in French's study. Libo (6) measured by a projective technique the tendency of individuals to stay in their group. Schachter (9) measured cohesiveness by asking his subjects whether they wanted to stay in their group, how often they would like to meet, and whether they would like to ask the other members to stay in the group. Festinger, Schachter, and Back (3) studied group cohesiveness in a housing project and measured the proportion of choices within the group as related to the number of choices made from the entire project. Several sociometric studies dealt with group cohesiveness (2, 5), and an index of group cohesion was presented by Proctor and Loomis (8). Yet, Cartwright and Zander (1, p. 88) wrote that "relatively few systematic studies have been conducted with the purpose of determining the factors increasing or decreasing group cohesiveness."

The purpose of this paper is to suggest a way in which some of the factors that influence group cohesiveness under stress could be assessed. Cohesiveness is defined here as the tendency of individuals to stay in their group. The more members want to stay in their group and the stronger they want to stay, the more cohesive is the group. Thus cohesiveness could be measured by taking the product of the number of members who choose to stay in the group and the intensity of their choices. This choice must be somehow related to the needs of the individuals and the way these needs are met in the group, provided the group is voluntary. In a democratic society no one joins a group unless he expects the group to satisfy some of his needs. Let us call the ability to satisfy needs "power," and the willingness to do so "acceptance" (14).

Obviously group relations and behavior depend upon *power* and *accept-*

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ance, but not necessarily upon power and acceptance as they actually are. The way in which the members of a group *see* each other in terms of power and acceptance seems to determine their behavior. More specifically, the behavior of group members depends on what kind of needs they have and what they think about each other's ability to satisfy these needs, and about their willingness to do so. Accordingly, motivation and perception seem to determine the interindividual relationships.

Groups can be divided into three categories (16): If people join a group having in mind receiving power and acceptance, this group is an *instrumental* group. If they join a group with the idea of giving and receiving power and acceptance, it is a *mutual acceptance* group. If people join a group with the purpose of giving without receiving, this is a *vectorial* group. The three types of social relationship may be illustrated with the following examples. An infant's relation to mother is *instrumental*; a well adjusted marriage is a *mutual acceptance* relationship; mother's relationship to her infant is usually *vectorial*. Any group is what it is to its members; e.g., if a man marries in order to receive protection and to be "mothered," his marriage is *instrumental* for him.

B. OBJECTIVES OF THIS STUDY

Two hypotheses were tested in this experiment. First, that in instrumental and vectorial groups cohesiveness is more highly correlated with power than with acceptance, while in mutual acceptance groups, cohesiveness is more highly correlated with acceptance. Since individuals seek to receive and not to give in an instrumental group, the more the group satisfies their needs, the more they like to stay there. This cannot hold true for mutual acceptance groups. In this kind of a group individuals want to give and to take; even if taking is impaired, giving may still serve as a source of gratification for some specific social needs. The attitude of members to each other, especially their willingness to help, even if actual help is not too abundant, may strengthen the cohesiveness of a group. In a vectorial group power comes again to the fore. Members of such a group are serving a common goal or ideal. The more they think about the usefulness of their group, and the higher they estimate the ability of their co-members to satisfy the common need and to serve the common goal, the more they will be inclined to stay in their group.

The second hypothesis deals with failure. Failure will probably be most damaging to the cohesiveness of instrumental, less to that of mutual acceptance, least to that in vectorial groups. When a group fails to achieve its objectives, cohesiveness is likely to suffer. It must suffer most in groups

which are instrumental in gratification of the needs of their members. Cohesiveness should suffer very little in groups which are ready for self sacrifice for a common goal.

These two hypotheses grew out of a series of empirical studies that dealt with friendship relationship (10), class-room situations (11), spontaneous groups in childhood and adolescence (12), social development in Israeli adolescents (13), and clinical studies (15).

C. SUBJECTS AND PROCEDURE

Fifteen subjects were chosen from the student body in social psychology classes and divided into three groups equated for age, education, and status in college. Each group was composed of three men and two women. Each group worked in a separate room, and a supervisor and two observers were attached to each group. No communication between the groups was permitted. Each group had two meetings, and on each meeting the same task was given to all the groups.

At each meeting each subject received a card with 10 names, a total of 50 names for each group. Each group received the same five cards. The subjects were told that their cards contained 10 names of well known psychologists, and their task was to describe the activities of those 10 psychologists. A failure to give a description or a false description was marked by zero; one correct item, by one point; more than one item, by two. At the first meeting three names out of 10 were fictitious, at the second meeting six out of 10; at the second session all groups faced twice the number of fictitious names.

The characteristics of *instrumental*, *mutual acceptance*, and *vectorial* groups were instilled in the three experimental groups by special instructions. The members of one of the groups were told that they were to get individual marks on the test which would have a bearing on their final grade. They were permitted to help each other if they wished to. The instruction aimed at creating a situation in which every one would like to be helped in a test which looked quite important to the subjects. Thus an *instrumental* type of a group was encouraged.

The members of the second group were told that their group would receive a total mark composed of the sum of individual marks, and the total mark would be divided equally between the members. Obviously they should help each other, because the more they coöperated, the higher the marks earned by both the group as a whole and by its members. In this manner the *mutual acceptance* type of a group was promoted, and the "give and take" idea encouraged.

The members of the third group were told that their group was working for the benefit of science and that they were participating in a crucial experiment. They were permitted to coöperate. No marks could be earned in this group. Accordingly the unselfish, giving, vectorial attitude was encouraged.

At the end of each session *Statograms* were administered. A statogram is a new research instrument that measures how people perceive one another in terms of power and acceptance. The statometric technique permits additional ratings on leadership and choice. The latter resembles Moreno's (7, 8) sociometric technique, but it is based on a different rationale and applies new mathematical formulae (14).

In the reported experiment statograms were used for power, acceptance, and choice ratings. Three questions were posed. The first (power) question was: "Whom do you consider as capable of contributing most to the successful performance of the task assigned to you?" Each subject was requested to mark with a plus sign those whom he considered capable of solving the problem. Then each subject assigned a rank order to the plus marks, the highest plus number indicating the most capable person or the "strongest" one, and the lowest number indicating the least capable or the "weakest" one.

The second question dealt with the willingness of the members to help each other as seen by each of them. The highest plus number indicated the most friendly person and the highest minus sign indicated the most unfriendly one.

The third question was related to cohesiveness. The subjects were asked whom they would like to remain in their group and whom they would not. Following the same procedure as before, the highest plus number indicated the most desirable, and the highest minus the least desirable individuals.

It was expected that the failure of all groups at the second session to resolve the assigned task would produce considerable changes in the mutual ratings of the subjects on power, acceptance, and choice.

The scores obtained on the statogram can be graphically presented on quasi-Cartesian ordinates, and four individual and group quotients of power, acceptance, choice, and leadership computed (14). Since the reported experiment does not deal with the status of each individual within a group nor with the dynamics of inter-individual interaction, only group quotients are here presented. All group quotients were computed in the same way, e.g., the Group Power Quotient is

$$GPQ = \frac{P \times 200}{N^2 (N-1)}$$

where N indicates the number of members and P the sum of all scores of power given by all members to all members.

The GPQ indicates how the group members evaluate the ability of the group to satisfy their needs; it is the power of a group as perceived by its members. The GAQ (Group Acceptance Quotient) indicated how the group members evaluate the willingness of the group to satisfy their needs; the GAQ represents the atmosphere of friendliness as perceived by the members of the group. The GCO (Group Choice Quotient) indicates to what extent the subjects choose one another in terms of remaining in the group. The GCO represents the centripetal forces and its cohesiveness.

D. RESULTS

The results obtained in this experiment are tentative, since no effort was made to validate the data in a pilot experiment with a limited number of subjects. In this experiment the scores which indicate cohesiveness were highly correlated with scores of choice and power in the instrumental and mutual acceptance groups (see Table 1). The rank-order coefficient of cor-

TABLE 1
RANK-CORRELATION OF CHOICE SCORES WITH POWER AND ACCEPTANCE SCORES

	Experiment I	Experiment II
<i>Instrumental Group</i>		
Choice-Power	.80	.95
Choice-Acceptance	1.00	.57
<i>Mutual Acceptance Group</i>		
Choice-Power	.05	.20
Choice-Acceptance	.82	.90
<i>Vectorial Group</i>		
Choice-Power	.87	.80
Choice-Acceptance	.67	.72

relation between choice and power scores in the instrumental group was .80 in the first experimental session and .95 in the second. In the vectorial group the correlation between choice and power scores was .87 in the first session, and .80 in the second. As was expected, the coefficient of correlation between choice and power was much lower in the mutual acceptance group, namely, .05 in the first and .20 in the second session.

The rank-order correlations between choice and acceptance show less regularity. Only the mutual acceptance group reveals fairly consistent coefficients of correlation between choice and acceptance scores, as was anticipated. This coefficient is .82 in the first experimental session and .90 in the second. In the instrumental group the coefficient of correlation between

choice and acceptance scores declines from 1.00 in the first to .57 in the second session. In the vectorial group this coefficient went up from .67 in the first session to .72 in the second. Obviously the failure of all groups in the second session had a different impact on intra-group relations in all three groups, causing a considerable decline in acceptance scores in the *instrumental* group. No effort was made to analyze the statistical significance of these changes for reasons mentioned above. The main consideration was given to explorations of research possibilities and research tools rather than to finding a final proof or disproof of the postulated hypothesis. At any rate, this experiment fell in line with the main hypothesis which said that cohesiveness in instrumental and vectorial groups is better correlated with power, and in mutual acceptance groups better correlated with acceptance.

The second hypothesis of this paper was that cohesiveness in an instrumental group will suffer most when the group will be exposed to hardships and least in a vectorial group. Table 2 presents the change in group quo-

TABLE 2
GROUP QUOTIENTS

	Experiment I	Experiment II	Difference
<i>Instrumental Group</i>			
GPQ	68	60	- 8
GAQ	54	50	- 4
GCQ	60	46	- 14
<i>Mutual Acceptance Group</i>			
GPQ	70	74	+ 4
GAQ	78	74	- 4
GCQ	86	80	- 6
<i>Vectorial Group</i>			
GPQ	92	98	+ 6
GAQ	54	74	+ 20
GCQ	90	92	+ 2

tients that took place in all groups when they were exposed to failure in the second experiment. It is worthwhile to mention that the maximum of any group quotient is one hundred. The group power quotient in the instrumental group declined from 68 in the first experiment to 60 in the second. Apparently (and both the interview of group members and reports of observers confirm it) the members of the *instrumental* group have lost some faith in each other's possibility to be helpful. A smaller decline in group acceptance quotient was noticed, namely from 54 at the first experiment to 50 in the second. The greatest loss suffered was in the group choice quotient which declined from 60 in the first experiment to 46 in the second.

This loss of 14 points in choice quotient in the instrumental group compares unfavorably with a loss of six points in the mutual acceptance group and a gain of two points in the vectorial group. The mutual acceptance group has gained four points in the group power quotient (from 70 in the first to 74 in the second experiment), lost four points in acceptance (from 78 to 74), and lost in the choice quotient six points (from 86 to 80). Only the vectorial group gained in all three quotients. The power rose from 92 in the first to 98 in the second experiment, the acceptance quotient rose from 54 to 74 and the choice rose slightly from 90 to 92. This is the only increase in cohesiveness noticed in the described study.

It is worthwhile to mention that though the value of each group quotient indicates a certain distribution of power, acceptance, and choice within a given moment, in this experiment we have been interested in the change that took place in an adverse situation. The fact that the group choice quotients were in the first experiment respectively 60 in the instrumental, 86 in the mutual acceptance, and 90 in the vectorial group is of little significance for our study. In a series of experiments that followed the reported one some of the instrumental groups had very high group choice quotient, i.e., a high degree of cohesiveness. This is quite possible. However, the problems raised in this paper concerned the (a) correlations between choice and power and acceptance, (b) the impact of failure on the choice quotients. From the angle, the value of the quotients in the first experiment is of little importance.

E. DISCUSSION

The present experiment should not be considered as a proof or disproof of the hypothesis. It is one out of a series of pilot experiments and its purpose is to introduce a new method in group dynamics and to help pave the way for more precise experiments in which all possible variables would be strictly controlled, and the subjects in the three respective types of groups be rigorously matched. These experiments, some of them already started, will permit a sound statistical analysis (variability, level of confidence, etc.) which has been omitted in the present paper.

Within these limitations the discussion of the present experiment has to be confined to methodological considerations leaving out, at least temporarily, any effort to discuss the validity of the proposed hypothesis.

It is interesting to note that the *GPQ* (group quotient of power) declined in the instrumental group only. Undoubtedly all three groups were exposed in the second session to the same degree of hardship. All three groups had

the same task in which 60 per cent of the names were fictitious. Failure should have created a feeling of frustration in all three groups. This feeling of frustration should have led to a decline in mutual rating of power. Power has been defined as the ability to satisfy needs; since the need to solve the task has been largely unsatisfied, a general feeling of helplessness should have been created.¹ As the observers have reported, the group members asked each other for solutions to the unsolved tasks and got no response. In an interview after the experiment one group member who marked down all his co-members with negative marks on the power scale explained it as follows: "At the first experiment they helped me, so I gave them positive marks on the statogram. At the second experiment they were of little help, and I gave them accordingly lower marks."

This did not happen in the mutual acceptance and vectorial groups. The reason for it is quite simple. People respond to reality, but not to reality as it is, but as it is perceived by them. The statogram does not measure how much power groups or individuals possess but how people are *perceived* by each other in terms of power. The statogram measures the power of an individual as seen by other individuals.

It is easy to understand why in the mutual acceptance and in the vectorial group there was no decline in the power ratings. The members of these two groups felt less frustrated than the members of the instrumental group despite the fact that they experienced the same failure. Thus the term frustration requires some refinement. One thing is hardship, obstacle, barrier, or failure which is a part of reality and another thing is the feeling of frustration which is the reaction of a person to failure. This reaction is an unpleasant feeling of failing, of being inadequate, of being frustrated. There is no doubt that all groups were exposed to the same hardship, but they reacted to it differently. The members of the instrumental wanted to be helped; while disappointed as to the ability of the other members to do so, they gave each other lower scores in terms of power, and consequently did the same in regard to choice. In the mutual acceptance group people were willing to give and to get; they saw the weakness of all group members inclusive themselves, thus there could not be much change in power ratings; however there was a slight decline in choice ratings. The members of the vectorial group felt, as consequent individual interviews have proved, that

¹ The writer made a few preliminary experiments with *self-statogram* on which group members were asked to write down their estimate of how others have rated them. This kind of self-evaluation based on empathy and compared to reality ratings indicates a possibility of a statogram study of normal and abnormal personality types. The theoretical premises underlying the present paper have been applied in a study of schizophrenia (15).

despite hardships they were doing their best and had very little if any feeling of frustration.

One may criticize the experimental design because it has not provided for equal amounts of feeling of frustration. Obviously, it is feasible to experiment with groups in such a way that the decrease in Group Power Quotient is the same in all of them, and then to seek other variables. The present experiment did not try to do it; its main purpose was to find out how the behavior of the three respective group types will be affected by the same degree of real hardships. This is, indeed, a very important problem. In almost all life situations, such as classroom, industry, group work, Armed Forces, etc., groups are exposed to certain hardships. The degree of these hardships can be compared and sometimes even measured. It seems, therefore, to be quite important to find out to what extent failure influences the cohesiveness of groups, and the present experiment, it is hoped, has shown a new experimental method of attacking this difficult problem.

F. SUMMARY

This paper tested experimentally the relationship between group cohesiveness, defined as the willingness of individuals to stay in their group, and power, and acceptance. Power was defined as the ability to satisfy needs and acceptance as to the willingness to do so. A division of groups into three categories was suggested. In an instrumental group people seek to receive power and acceptance; in a mutual acceptance group people join having in mind to give and to take power and acceptance; in a vectorial group the aim of the people is to give power and acceptance either to some individuals or to an ideal.

It was found that cohesiveness is better correlated to power than to acceptance in the instrumental and vectorial groups, and better correlated to acceptance in the mutual acceptance group. When all three groups were exposed to stress, cohesiveness has suffered most in the instrumental group and least in the vectorial group.

All these findings are tentative and more experiments are forthcoming in order to corroborate the data obtained in this study.

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THE INFLUENCE OF CERTAIN COMMUNICATOR CHARACTERISTICS ON LIP READING EFFICIENCY*

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A. PROBLEM

Skilled lip readers have observed that the efficiency with which they read lips seems to vary not only from communicator to communicator but also from situation to situation with the same communicator. The present investigation seeks to clarify this variation in lip reading efficiency by isolating one of its possible sources, viz., the rôle of the communicator.

Lip reading is here considered as a special communication skill, and as such it may be placed within the broader context of communication in general. The lip reader is an "interpreter" of symbols which are being produced and/or manipulated by some "communicator" (2). These symbols make up the content of the communication which the lip reader is attempting to understand and to which he responds. The degree to which his responses (interpretations) are congruent with the symbolic material (the cues produced by the communicator) determines the success of the communication. In addition to the cues provided by the content of the communication, a number of other cues are present which elicit responses from the interpreter and influence his interpretation of the content: those provided by (a) the context of the situation (e.g., persons and objects present at the time); (b) the medium of communication; and (c) the communicator (3). The present study is concerned with the cues provided by the communicator.

The specific hypothesis being tested is: Lip reading is relatively more accurate when the interpreter has positive rather than negative feelings about the communicator. Studies not involving lip reading (4, 5, 6) have shown that sources of communication which are judged positive, prestigious, and worthy of respect are more effective influencers of opinion than negatively evaluated sources. The present study focuses not on the effects of a communicator with respect to attitude or opinion change or agreement or

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disagreement with the content but rather on understanding, or interpretation, of the content.

B. METHOD

1. *Experiment I*

The first, or "Natural Group," experiment utilized 10 natural groups of college students with three to five members in each group. These groups were study units from two lower-division psychology courses and, at the time of the experiment, each had been meeting together, once a week, for approximately 10 weeks, so that members presumably had interacted with each other sufficiently to have developed differential feelings about one another. *Ss* were untrained in lip reading.

During the experimental session *Ss* were required to lip read every other member so that each had an opportunity both to communicate and to lip read. To eliminate audibility, but not visibility, the communicator read a list of 12 sentences behind a one-way vision screen which made up a part of the wall separating him from the adjoining room in which the interpreters were seated. After each sentence the speaker paused for 20 seconds and the lip readers wrote their version of what had been said. Five different lists of equated average difficulty were constructed from a group of 60 sentences for which empirical difficulty scores were available.² Difficulty here refers to difficulty of comprehension under lip reading conditions.

At the end of the session group members were asked to "rank each member of your group (who is present now) according to how much you would prefer to have him or her be in your group next semester."

2. *Experiment II*

This "Contrived Group" experiment utilized two female communicators, of pre-determined equivalent communicative ability (in lip reading situations), and 11 groups of lip readers with two to four members per group. The two communicators were of similar height, weight, and general appearance. The lip reading *Ss* were of normal hearing and had had no prior lip reading experience. They were selected from a larger group of introductory psychology students on the basis of scores which they had made on the Iowa Lip Reading Film Test, Form *A* (8), so that members of a single group would be fairly homogeneous in lip reading ability. All members of a group were of the same sex.

Each of the groups met with the two communicators to discuss, for half

² These 60 sentences are included within Forms *A* and *B* of the Iowa Lip Reading Film Test (8).

an hour, a current campus issue. The communicators were introduced, and functioned, as group leaders. Each communicator alternated, from group to group, in playing the rôle of an "aggressive" or "moderate" leader, as specifically defined in terms of differential behavior.³ Following the discussion, Ss filled out a questionnaire in which they evaluated the two group leaders. A check was made on the effectiveness with which the two rôles had been played by the experimental communicators. The evaluative comments that group members had made about the two rôle-playing discussion leaders were submitted to 10 judges (faculty and post-M.A. graduate students in psychology) who rated each comment, arranged in a random order, on a five-point affect scale. These judgements were found to be highly reliable. The mean rating of statements which had been made about the "aggressive" leader were then compared with the mean rating of statements that had been made about the "moderate" leader. A sign test (7) revealed that the difference between these two groups of ratings was significant ($p < .01$) in the direction of higher ratings (more positive affect) for the "moderate" than for the "aggressive" leader.

At the same time and on the same day but two weeks after the discussions had taken place, each group met again. This time Ss were asked to lip read four speakers, each of whom read a 12-sentence list of equivalent difficulty behind a one-way vision mirror. The first speaker was always the same and was used to provide practice experience for the Ss. The other three speakers were the two communicators who had posed as group leaders during the discussions and another female speaker whose communicative ability had previously been found to be equivalent to that of the experimental communicators. These latter three speakers read sentences in a predetermined and varied order to control for order effects.

C. RESULTS

1. *Experiment I*

Lip reading scores were calculated by dividing the number of correct words recorded by an interpreter by the maximum possible correct score

³ The following general descriptions of the two rôles were used as a basis for differentiating between them: aggressive—"keeps criticizing in a superior, smug, and nasty manner. Others in the group should see her as a disagreeable individual who is extreme, opinionated, and dogmatic. She should be seen this way *not* because she is critical of *CU* students *but* because of the manner in which she gives these criticisms. She should show little respect for the opinions of others."; moderate—"tries to soothe ruffled feelings; she tries to see both sides of the argument; doesn't state too many of her own personal opinions but rather behaves like a true moderator of the discussion; should make clear that the purpose of the discussion is not to solve the problem but merely to get expressions of opinion."

for the particular list read. The five lists ranged, in number of words (maximum score), from 72 to 80.

The relationship between (a) lip reading scores based upon different communicators and (b) the position of these communicators in the preference hierarchy, as determined by responses to the questionnaire described above, was found by means of a χ^2 analysis (7) to be nonsignificant. When, from the four and five person groups, lip reading scores made on the "most-preferred" communicator were compared with scores made on the "least-preferred" communicator, however, the difference between these two sets of scores was found to be significant ($t = 2.21$; $df = 23$; $p < .05$). A summary of these results is presented in Table 1.

TABLE 1
MEAN LIP READING SCORES MADE ON DIFFERENTLY PREFERRED COMMUNICATORS

	N	Rank-preference position of communicators				χ_r^2	p
		I	II	III	IV		
3-person groups	12	.46	.55			1.3	> .20
4-person groups	15*	.39	.34	.31		4.9	> .05
5-person groups	9*	.40	.38	.32		1.7	> .50
					$\epsilon\chi_r^2 =$	9.2	> .10
4 & 5-person groups	24	Most preferred		Least preferred		$t = 2.2123$; $p < .05$	
		.40 ($s^2 = .02$)		.33 ($s^2 = .02$)			

* The scores of one member of a 4-person and one member of a 5-person group were not used due to misunderstood instructions in one case, and reported audibility of speakers in the other case.

Although a general practice effect was found, i.e., improvement of lip reading efficiency from the first to the last communicator ($\chi_r^2 = 14.1$; $df = 6$; $p < .02$), the difference in efficiency on most and least preferred communicators was shown, by a χ^2 test, not to be a function of this practice effect. No systematic relationship, in other words, was found to exist between communicators' position in the trial sequence and the Ss' preference for them.

2. Experiment II

An analysis of variance of the lip reading scores made by the same Ss on the speaker who had previously played an "aggressive" rôle, on the speaker who had played a "moderate" rôle, and on the "control" speaker who had not taken part in the previous group discussions produced an F that was not significant. Although the average scores under these three conditions did not differ, a glance at the raw scores showed clearly that individual Ss did make

different scores on different communicators. The possibility of an unanticipated interaction between communicator and the rôle played by her was consequently investigated.

With scores made on the "control" speaker eliminated, a 2×2 analysis of variance was performed to test for the differential effects of (a) rôle played by the communicator, (b) communicator, regardless of rôle played, and for the interaction between them. The interaction variance was significant ($p < .01$), whereas the main effects when tested against the interaction variance were not. A t -test revealed that scores made on one of the experimental communicators (Y) by S s who had interacted with her when she played an "aggressive" leader were significantly higher ($p < .02$) than scores made on her by S s who had interacted with her when she played the "moderate" leader. The reverse situation was found to hold true of the scores made on the other experimental communicator (X), i.e., higher scores by S s who had seen her as "moderate" than by S s who had seen her as "aggressive." This latter difference, however, fell short of significance.

D. DISCUSSION

Evidence was obtained from the "Natural Group" experiment which supports the hypothesis: when members of a group had an opportunity to work together, they could lip read most preferred colleagues more efficiently than those least preferred.

The results of the "Contrived Group" experiment, however, do not support the hypothesis. Although the "moderate" leader elicited more positive affect following the discussions than did the "aggressive" leader, the "moderate" leader was not, subsequently, more efficiently lip read. Instead, a significant interaction was found to exist between the individual communicator and the rôle she played. Communicator Y was lip read better by those individuals for whose discussion she had played the aggressive leader; just the reverse was true for Communicator X (although not significantly).

These unexpected findings, considered in the light of the adjudged typical day to day behavior of the two girls, require explanation. In the opinion of the investigators,⁴ much of Y 's behavior can be characterized as aggressive, independent, and dominant. X , on the other hand, might be described as humble, demure, and gentle. On numerous occasions X expressed dissatisfaction with her portrayal of the "aggressive" leader, saying that she found it difficult to play this rôle and much preferred that of the "moderate."

⁴ Both girls were members of an upper division class taught by the senior investigator.

Y, on the other hand, verbalized enjoyment of, and confidence in, her "aggressive" rôle and seemed to perform it with gusto.

It may be, therefore, that the "naturalness" of the rôle played influenced the perceived distinctiveness of the communicators. During the discussion, Ss may have learned to make differential discrimination responses to the two communicators which were later elicited in the lip reading situation. When Y played her natural "aggressive" rôle and X her natural "moderate" rôle, the distinctiveness of the cues presented by the communicators may have been greatest, thus enhancing discrimination between them. When the two communicators were playing rôles that were opposed to their natural behavior, however, discrimination between them was perhaps more difficult: each communicator may have tended to underplay the unnatural rôle and to revert to more natural behavior, thus reducing the behavioral differences between them. In fact the investigators made such observations as they watched the discussions through a one-way vision screen.

The two communicators were purposely selected so as to be similar along a number of dimensions, e.g., sex, height, weight, general physical appearance, and communicative ability. The major difference between them was to have been with respect to the manipulated variable of rôle played. When X and Y played "unnatural" rôles, the difference resulting from the rôles did not obtain. When unnatural rôles were played, therefore, less successful discrimination between the two communicators could be anticipated than when natural rôles were executed. In the lip reading situation, moreover, both X and Y could be expected to be lip read with greater efficiency by Ss who had previously perceived them in the discussion situation as more distinctly different from one another than by Ss who had perceived them as less distinctly different as a result of the paucity of differential cues. When the scores made on X-moderate and on Y-aggressive and also the scores made on X-aggressive and Y-moderate are combined in order to represent scores made on communicators who had played, respectively, "natural" and "unnatural" rôles, the proposed explanation receives confirmation: the difference between the two means was found to be significant ($t = 2.50$; $p < .02$).

E. SUMMARY

1. Two experiments tested the hypothesis that lip reading, considered within the more general context of communication as a communication skill, would be more efficient when the interpreter (lip reader) has positive rather than negative feelings about the communicator.

2. Partial support for the above hypothesis came from the results of one

experiment in which it was found that "most preferred" group members were lip read significantly better than those "least preferred."

3. The results of a second experiment suggest an additional communicator variable important for the prediction of lip reading efficiency, namely, distinctiveness or discriminability of the communicator in relation to others. Two experimental communicators who had rôle-played "aggressive" and "moderate" discussion leaders were later lip read most efficiently by Ss who had seen them in that rôle which was the most natural one for them to play, i.e., the one most like their own typical behavior. The hypothesis itself, however, was not supported even though Ss' statements about the "moderate" leader were judged to indicate more positive affect than those made about the "aggressive" leader.

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BOOKS

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